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ABSTRACT

These proceedings contain the texts of the papers presented at a conference on consumer interests. Addressed in the first series of concurrent sessions are the following topics: consumers' new economic positions, consumers' choices with respect to price and quality trade-offs, time value in consumption decisions, and consumer information issues. The second series of presentations includes papers dealing with nutrition policy and food consumption, the Symposium on Science in Institutions of Higher Education, and new dimensions in consumers' regard. Provided next are texts of presentations made at the conference poster session and annual business meeting. The next group of papers deals with international consumer policies, consumer education, the value of time in household production, macroconsumer issues, food consumption patterns, new financial strategies for consumers, careers in consumer economics, and certification in consumer education. Concluding the proceedings are groups of papers dealing with videotex, international consumer affairs, family composition and consumer choice, consumer policy positions, income management, new films for the secondary consumer education and consumer economics teacher, and airline deregulation. (MN)

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PROCEEDINGS

29th Annual Conference

of the

AMERICAN COUNCIL ON CONSUMER INTERESTS

March 16-19, 1983
Kansas City, Missouri

Conference Theme

National Economic Policies:

The Impact on Consumer Welfare

Edited by

Karen P. Goebel
School of Family Resources and Consumer Sciences
University of Wisconsin-Extension
Madison, Wisconsin

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PROGRAM

AMERICAN COUNCIL ON CONSUMER INTERESTS
29th Annual Conference
March 16-19, 1983

Kansas City, Missouri

Theme
National Economics Policies: The Impact on Consumer Welfare

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Presiding: Mel J. Zelenak, University of Missouri-Columbia
Pat Bonner, University of Missouri-Columbia

Speakers: Marge Merchant, University of Massachusetts
Ray Price, University of Minnesota
Arch Troelstrup, Stephens College

Thursday, March 17, 1983

FIRST GENERAL SESSION

Presiding: William Fasse, University of Arizona
President, ACCI

Welcome: Mel Zelenak, University of Missouri-Columbia
Local Arrangements Chair
Executive Director, ACCI

Yvonne Matthews, University of Missouri-Columbia
President, Association for Consumer Education
(Missouri Chapter)

Scott Williams, Ohio State University
National Student Representative, ACCI

COLSTON E. WARNE LECTURE

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Pat Pollak, Cornell University
"New Trends in Housing" 10

Lawrence Shepard, University of California-Davis
"Recent Changes in Financial Markets Serving Consumers" 15

*No Manuscript Submitted

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FROM THE EDITOR

The 29th Annual Conference of the American Council on Consumer Interests reflected the changing economic times of our nation. The conference theme -- National Economic Policies: The Impact on Consumer Welfare -- resulted in a wide range of manuscripts reflecting issues of inflation, credit, trade and consumer education. Those papers are assembled in this Proceedings issue. They will provide a continuing source of stimulation for students and professionals in consumer science.

All speakers on the annual conference program -- those presenting refereed papers, participating in poster sessions, panels and forums, invited speakers, and the Colston Warne lecturer -- were invited to submit camera-ready manuscripts, typed to Proceedings specifications for inclusion here. The cooperation of presentors and support staff has been excellent.

The program chair has provided us with an excellent program and is to be congratulated for that effort. Appreciation is extended to the speakers, manuscript reviewers, and local arrangements committee. Special appreciation is extended to Sandra Hunter, Randy Simon, and Anna Bender for their technical assistance in the preparation of the Proceedings.

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THE CONSUMER MOVEMENT IS ALIVE AND WELL

Anwar Fazal*

ABSTRACT

The President of the International Organization of Consumers Unions in a letter to Dr. Colston Warne traces the growth of the consumer movement and speaks of the beginning of the 'fourth wave' of the movement, its demonstrated ability to give a multinational response to multinational issues. He speaks of the growth of the movement in developing countries and the growth of networks around pesticides, pharmaceuticals, infant foods and the dumping of hazardous products.

The consumer movement everywhere owes a great deal to Dr. Colston Warne. I owe him a great deal too for letting me walk with him during my first days in the consumer movement.

I also owe Dr. Warne a letter. Last night, I wrote that letter and I like to share it with you.

"Dear Dr. Warne

In 1934, nearly 50 years ago (7 years before I was even born), you said, 'It is likely that nothing short of a revolution will substantially alter the character of the business system or its ally, advertising.'

I like to let you know of the state of that revolution:

- that revolution began here in the U.S. in the 1900s, the so-called 'Progressive' era, marked by the work of Dr. Wiley and 'his poison squad', Upton Sinclairs' 'The Jungle' and which culminated in the Pure Food Law of 1906;
- that revolution that had its second wind in the 1930s, the 'New Deal' era marked by the work of Chase, Schlink and Kallet, the most significant event of which was the founding in 1936 of Consumers Union, now the world's largest consumer organization;
- that revolution that burst out a third time with great excitement in the 1960s, marked by the work of Kefauver and the world's best-known consumer advocate, Ralph Nader, and the founding of the International Organization of Consumers Unions. Perhaps, the most stirring and hopeful event of that era was the speech by the late President J.F. Kennedy on the rights of consumers, a speech made exactly 21 years and 2 days ago - March 15. On that date groups from as diverse countries as Fiji, Finland, India, Hong Kong, Spain, the United Kingdom and a host of others celebrated for the first time this year Consumer Rights Day.

Dear Dr. Warne, all this is familiar to you. More than that, you were so much a part of it. We need continuously to be reminded of the past, the struggle, of the starts, the bursts and the busts, the excitement, the victories, the dashed hopes. We need to celebrate more victories, and we need to learn from our failures.

Dear Dr. Warne, the eighties are seeing the beginning of a FOURTH WAVE in the consumer movement - a period during which the movement has become really global, being able to give an effective multinational response to multinational issues; it has also tasted its first major victory at the global level, a victory of health over profits, a victory that involved the protection and promotion of a natural, superior, product - breastmilk. The International Code for the Marketing of Breastmilk Substitutes, which was passed on May 21, 1981, is the first global consumer protection code.

Yes, Dr. Warne, the consumer movement is alive and well.

The struggle for the control of reprehensible and often irresponsible marketing has spawned new global networks; it has seen an explosion of interest in our work. It has drawn together groups from churches and unions, feminist groups and professionals; it has given us this nation's largest non-union boycott - that of Nestle's products, and the first global consumer boycott of its kind - a boycott very critical to the success of the campaign to protect and promote breastfeeding.

This work on breastfeeding is being coordinated by a global network called the International Baby Food Action Network (IBFAN).

New networks exist around pesticides, around pharmaceuticals, around the export of banned and severely restricted products - Pesticide Action Network (PAN), Health Action International (HAI) and the Consumer Interpol.

The consumer movement has began to excite, to interest and to involve ordinary people in a way unprecedented in our short history. Diverse organizations are building on the strength of weak links, creating decentralised participatory structures, unencumbered by bureaucracy, which enable the maximum output of citizen groups spread throughout the world and united in a new form of solidarity. There are now, for example, efforts for global codes and other measures to put an end to unethical and harmful practices in the pharmaceutical and pesticide industries.

And consumer groups are linking the Third World with the First World, sharing and acting together.

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Research in the United Kingdom shows a sonic mosquito repellent to be useless, if not dangerous, because of the false security it may give to people in malaria endemic areas. The information flows through telex machines to the headquarters in Penang, Malaysia, of Consumer Interpol, the popular name of a global citizens system of alerts on hazardous products. In Indonesia, the government on receipt of the alert from its consumer organization, bans the product!

Yes, Dr. Warne, the consumer movement is alive and well.

Take the ten largest nations in the developing world which together have a population of 2.4 billion. The representative of the People's Republic of China at the first United Nations Consultation on Consumer Protection stated: 'It is the sacred right of consumers to be protected.' India, the second largest nation of the world, has 27 consumer groups, Brazil has 62, Thailand has seven, the Philippines has four, Nigeria has three. Pakistan has one and Bangladesh and Indonesia have among the most active groups in the developing world. In Mexico, the media give out 10,000 consumer protection and information messages a day (one of my favourite messages is 'give affection, don't buy it'). The new Spanish and Korean constitutions enshrine the rights of consumers.

Yes, Dr. Warne, the consumer movement is alive and well.

But our work has just begun and we have miles to go, and like that, I guess, of the Kansas cowboy of the old days, the consumer advocates' work will never be done.

We live in a world in which 50,000 people die each day from lack of clean water and sanitation, while each minute the world spends US$1 million on arms, on guns, bombs, tanks, missiles.

Yes, Dr. Warne, the whole world is not that much a better place - we sometimes redistribute our problems, solving one, creating another. Violence, waste and manipulation have become profitable for the merchants of death, the rapists of the earth and those who manipulate our behaviour, our fears and desires.

Yes, Dr. Warne, the whole world is still too much a Sinclair's jungle; Kallet and Schlink would today probably write '4 Billion Guinea Pigs'. Yes, much of the world is still a dark marketplace - a marketplace in which there is too much VIOLENCE.

It has been estimated in a recent book 'Prescriptions for Death' that pharmaceuticals may be responsible for a minimum of 10 to 15 million cases of injury and one million deaths each year among the 3 billion people in the developing world. Conservative figures suggest at least 375,000 people in the Third World are poisoned yearly by pesticides and, of them, at least 10,000 die because of pesticides that are very often not permitted in the countries of origin.

We live in a marketplace in which there is too much WASTE. No figures will be enough to describe the wanton destruction and misuse of resources, of processes, of products in our society. We see the destruction of the tropical forests and the waste of meagre incomes by poor people in the Third World on useless, inappropriate products - products they do not need nor can afford. In Bangladesh, it was once said that the bulk of the vitamins bought were purchased by people who did not need them and they mostly were excreted as urine - vitamised urine is a luxury that Bangladesh can do without!

We live in a marketplace in which there is too much MANIPULATION. Probably one of the greatest behavorial changes occurred in the way in which the natural, unbeatable, self-reliant method of feeding babies with milk from the mothers' breasts was subverted and supplanted by two kinds of so-called 'modern technologies' - the technology of processed cows' milk and the technology of marketing. We see pervasive manipulation of people's behaviour through advertising and promotional tactics that border in certain industries on the criminal and immoral - offering bribes, from ballpens to women. The subversion of breastfeeding itself has been associated with health problems among 10 million infants a year. James Grant, Director of UNICEF, has said that if we can protect and promote breastfeeding we can save the lives of one million infants a year!

This fourth wave has its books too, among them:

- 'The Circle of Poison', by David Weir and Mark Schapiro;
- 'Bitter Pills', by Dianna Melrose;
- 'A Growing Problem', by David Bull;
- 'Prescriptions for Death', by Milton Silverman, Philip R. Lee and Mia Lydecker;
- 'Drug Diplomacy', by Charles Medawar and Barbara Freese;
- 'The Health of Nations', by Mike Muller;
- 'Pills, Pesticides and Profits', by A. Karim Ahmed, S. Jacob Scherr and Robert Richter;
- 'Tomorrow's Epidemic: Tobacco in the Third World', by Mike Muller.

Dr. Warne, I know you are too gentle to use harsh words and show anger. And I believe, as you do, that our means must be as humane as our ends. We both value the precious model that enables true participation of citizens in organizing our social, economic life in dignity and in safety. But sometimes you cannot but be angry.

Dr. Warne, the United States stands for many precious and valuable things. In the last few years, this precious model has been demeaned. An executive order on the subject of the export of banned and severely restricted products lasted 34 days. A measure that would have recognised a serious social respnsibility by the world's greatest power that recognised human rights was dismantled. There were reports of millions of dollars being offered to government officials of very corrupt governments, to store hazardous wastes. The Third World can become ignorant recipients of your Love Canals and your Times Beaches.

When the International Code for the Marketing of Breastmilk Substitutes was passed at the World Health Assembly on May 21 1981, 118 nations voted for it, one nation voted against it - that government was the United States!

When on December 17 1982, a few months ago, the United Nations General Assembly voted on international actions to help overcome the problem of dumping of hazardous products through the establishment of central list of such products, 146 nations, including every developed country in Europe, voted for these simple first steps. One government and only one government again voted against - the United States of America.

Dr. Warne, you will remember how Consumers' Union and yourself were subject to harrassment during the McCarthy era. The same evil methods are becoming visible again. There are attempts to colour the consumer movement as anti-free enterprise and recently your representative to the United Nations warned of an 'iron triangle' when talking to the American Enterprise Institute. She talked of the 'emergence of an iron triangle' uniting non-government organizations, Third World governments and ideologically sympathetic international bureaucrats in quest of international health and safety regulations. The Heritage Foundation, based in Washington, D.C. has recently made sinister innuendos about IPCU.

Dr. Warne, they lost when they tried such red baiting tactics with you and the Consumers Union and surely they will fail again because the truth is on our side.

And, Dr. Warne, that they pay this much attention must surely encourage us. We must be having an impact, we must be doing all right.

Yes, Dr. Warne, the consumer movement is alive and well.

You showed the way through fearless courage, through innovation of the science of consumption, through decades of stamina. Today, your work is continued in the halls of academia, when our work is considered worthy of study; our work is continued in the halls of the highest levels of governments of the world, in the forums of the United Nations, when we have achieved the dignity of resolutions, reports and even been rewarded with a Code.

It is being continued in the boycott of Ciba-Geigy's products by Swedish doctors, because of the marketing of the drug Clioquinol, banned there and in the United States, but still widely available in developing countries. It is being continued in the many thousands of people in the US and eight or so other countries where products of Nestle's (e.g. Taster's Choice) are being boycotted because of their non-acceptance in full of the WHO Code on the Marketing of Infant Formula.

These activities and those of the global networks of IBFAN, HAI, PAN and Consumer Interpol, will continue to be the cutting edge of the consumer movement. The precious work of information through testing and research will continue to give us that power to buy or not to buy and the work of public interest law groups will make laws more open and responsive to people's needs.

Dr. Warne, under your leadership, Consumers Union gave birth not just to IOCU but also very much to ACCI. ACCI represents an intellectual blood bank that is unsurpassed in the world. The reservoir of professional talent, of knowledge of skills in the field of consumer protection cannot be beaten. They have honoured you for your pioneering work. My hope is that more of them will walk the paths you have walked, that more will display the courage and stamina that you have displayed. My hope is that they will see the link between their work and the problem of consumers everywhere,

- that an international dimension will become part of their consumerist personality,
- that they become involved in the new exciting fourth wave not just for selfish professional reasons, not just for charity towards poor, helpless consumers in deprived countries, but because we share one earth, breathe one air, rise from one ocean - a fragile structure that calls for a new responsible consumption,
- that they will become aware that when we are talking about consumer rights, we are talking about human rights, about precious norms for a decent life with dignity.

If the consumer movement is to be competent and relevant to these times, these challenges have to be taken. In this new paradigm, in this fourth wave, we must recognise not just the cost of living but as much the cost of survival, not just value for money but as muchvalue for people. We have to see both the faces of high prices - the high price that hurts our pockets and the high price we pay in health, damage to our environment.

I am confident, Dr. Warne, that many more Americans will follow your footsteps and the American consumerists will rise even more strongly to help in that revolution for a more responsible consumer society that you talked about nearly 50 years ago.

Thank you, Dr. Warne, for everything. I promise to write again. Take care of yourself.

With warm regards

Anwar Fazal
President
International Organization of Consumers Unions.

P.S. Rhoda Karpatkin of the Consumers Union will be talking tomorrow about IOCU and its work. I hope many will attend that session and talk about concrete ways to strengthen the power of consumers."

Dr. Morse

Thank you. Thank you very much for this opportunity to read this letter in lieu of delivering a lecture.

Thank you all for your patience and God bless.

MAJOR CHANGES AFFECTING CONSUMERS AND CONSUMPTION

Benjamin Senauer, University of Minnesota[1]

ABSTRACT

This paper analyzes four major changes in our economy and society which affect consumers and their consumption. The major trends examined are the changing age structure of the population, the increasing diversity in family living patterns, the growing number of women employed outside the home, and the greater economic uncertainty confronting consumers.

Significant structural shifts have been occurring in our society and economy that have far-reaching implications for American consumers and their consumption. This presentation will focus on four major trends: the changing age structure of our population, the growing diversity of family lifestyles, the increased participation of women in the labor force, and the greater uncertainty of the economic environment. Most consumers have been directly affected by one or more of these changes. All of us are being affected by the broader social and economic impact of these factors.

CHANGING AGE STRUCTURE

The most significant trend in this area is the greying of our population. This change is related to two factors: the increased number of elderly among us and the maturing of the baby-boom generation, who have begun to enter middle age.

Between 1946 and 1964, 75 million children were born. Births rose from 2.9 million in 1945 to over four million in 1955 [5]. These baby-boomers, who are now 18 to 36 years old, account for one-third of the total U.S. population [9, p. 14]. What adds to the impact of this generational bulge is that the boom was followed in the late 1960's and early 1970's by a baby bust. Between 1965 and 1975, the fertility rate, the number of annual births per 1,000 women age 15-44, fell from 96.6 to 67.6 [16, p. 25]. This surge, then decline, in births has produced a cyclical pattern with enormous implications for consumption activity.

The demand for both private and public goods and services grows and shrinks in relation to the age profile of the population. The effect of the baby-boom generation on the age structure has been likened to "a pig in a python" [5]. The baby-boomers produced a tremendous surge in the number of primary, then secondary, then college students as they grew up. More recently the demand for primary, and then secondary, education has declined as the baby-bust generation has moved through the schools. Many suburban school districts have schools which were built during the early 1960's and then closed in the late 1970's. Higher education is now just about to feel the impact of the decline in births which occurred in the 1960's. The college-age population is predicted to decline by over 20 percent during the next several years.

Over the last several years the baby-boomers have been swapping their rock concert tickets for cribs and diapers. The baby-boom generation has begun to settle down, and in many cases start to have their own children. We now, in fact, are seeing a baby boomlet, which is an echo of the baby boom. The fertility rate among women of child bearing age has not risen significantly, but the sheer number of women of child bearing age has produced a rise in the number of births. Consequently, the number of primary school students is starting to rise, again.

As the baby-boomers mature, the demand for the products and services utilized by the middle-aged is increasing, which would include banks, stock brokerages, and optometrists. The aging of the baby-boomers has produced many easily recognizable shifts in consumer marketing strategies. Much of McDonald's advertising of its fast-food places now appears to be aimed at families with young children rather than teenagers. The Levi Strauss Company has added sport coats, and even suits, to its product line. These are just two examples of the reaction of business to the decline of the youth market. Even ski resorts are trying to change their image and attract couples with children as opposed to the young and relatively carefree. Over the last decade the average age of skiers has jumped from 23 to 28 years old [14].

The other major factor behind the age structure's shift is the increasing number of elderly. Between 1960 and 1980, the overall population of the U.S. rose by 26 percent [21, p. 10]. During that period the number of persons age 60 and over increased by 50 percent to 35.6 million, those 65 and over by 61 percent to 26.8 million, and those 75 and over by 77.3 percent to 9.9 million [23]. Contrary to popular belief, most of the elderly are reasonably well-off financially, and some are very well-off, which makes them an increasingly important factor in consumer expenditure. For example, only 4.5 percent of the households headed by someone 65 and over were below the poverty level in 1979, when money income and the market value of in-kind transfers were counted. The same poverty figure for all households was 6.4 percent [19].

Since the average retiree lives a longer number of years in better health than in the past, they have had a considerable impact on industries related to recreation and leisure time. Retirees have also been a substantial factor in the redistribution of our population toward the Sunbelt. The increased number of elderly has probably had its most significant impact on the demand for health care. Health expenditures increased from 5.3 percent of the Gross National Product (GNP) in 1960 to 9.4

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in 1980, at a level of $247.2 billion [21, p. 9]. The elderly, of course, are not the only factor behind this increase, but they are a major one.

Many of our older senior citizens, more of whom are women, require special support services. Women can be expected to live about eight years longer than men, which has added significantly to the number of single-person households, a topic that will be explored further in the next section. Widowed persons account for 13 percent of all households and most of them are widows, rather than widowers [15, p. 26].

In the future, the number of elderly will swell enormously when the baby-boom generation starts to reach retirement age. By the year 2020, projections are that 60.7 million Americans will be 60 years old and over [23, p. 7]. Just as the sheer number of baby-boomers created a youth culture in the 1960's, in which businesses that served the young, such as fast-food hamburger chains flourished; the next century may see a geriatric culture, in which those enterprises that serve the elderly prosper.

GREATER DIVERSITY IN FAMILY LIVING PATTERNS

In the 1950's and early 1960's, the ideal American family was presented as being composed of a husband, a wife, who stayed at home, and at least two, but better yet three or more, children. This was the family type featured in the commercials and television programs of the time. In the latter category, such programs as "Father Knows Best" and "Leave It to Beaver" come to mind. Obviously many households did not conform to this idealized pattern even then, but there has been a marked increase in the diversity of American family lifestyles in the period since.

A few statistics will dramatically emphasize this point. Out of the 80 million households in the United States in 1980 only 24.5 million were composed of a married couple with one or more children under age 18 [21, p. 47]. The number of single-person households has climbed from 6.9 million in 1960 to 17.8 million in 1980, and they now account for over one-fifth of all households [21, p. 46]. Families headed by women with no spouse present accounted for 9.3 percent of all families in 1960 and 14.6 percent in 1980, when they numbered 8.5 million [21, p. 48]. The proportion of children under 18 living with their mother alone has doubled since 1960.

The U.S. is splitting into smaller size households. Average household size declined by 17 percent between 1960 and 1980 from 3.33 to 2.75 persons [21, p. 44]. Recently there are indications that economic factors, the high cost of houses and mortgages, and climbing rents have caused more persons to live under the same roof. Children in their 20's are continuing to live with their parents and the elderly are moving in with their sons or daughters. Once the current recession is over, the basic trend will almost certainly be reasserted, though.

The changing patterns of family life have definite implications for consumer demand. Partly for financial reasons, but also because smaller families do not need as much space, newly built detached housing is shrinking in size. The increased number of one and two-person bouseholds is a factor in the growing popularity of condominiums and apartments. Campbell's now offers soup in a single-serving size.

If the household mentioned above was the ideal of the 1950's and early 1960's, then their dream, frequently fulfilled, was to live in a newly constructed suburban house and be able to purchase a new car as frequently as their neighbors. A recent study, "The Engines of Postwar Economic Growth", emphasizes the symbiotic relationship of highways, suburban housing, and automobiles as a crucial dynamic element in American economic growth [2]. Part of the economy's current structural problem is that although the auto-highway-housing relationship has weakened as an engine of growth, a replacement of the same magnitude has not yet developed. However, the fields of high technology and information, including education and services, particularly in the medical area, are increasingly playing the crucial dynamic role in our economy.

This country has always had a surprisingly inequitable income distribution. The top 20 percent of families, in terms of income, received 41.6 percent of the aggregate money income in 1979; whereas the bottom 20 percent received only 5.3 percent [21, p. 438]. The greater diversity of family types may be exacerbating this problem. Consider the likely difference in economic circumstances of a dual-earner professional couple without children, and an unskilled, single mother with three young children. The proportion of married-couple families below the poverty level is just 6.8 percent. However, for households headed by women with no spouse present 34.6 percent are below the poverty level [17, p. 31].

The decline of traditional family lifestyles should not be overstated, though. Traditional family patterns are still the norm. Seventy-three percent of the population lives in households headed by married couples, although the number is down from 82 percent in 1970. Three-fourths of all children under 18 live with both parents, although the number is only 42 percent for Blacks [18, 21, p. 49]. Americans are still a people that cherish family life. And the family/household unit remains the basic consumption entity within which income is pooled and consumer decisions are made.

INCREASED LABOR FORCE PARTICIPATION OF WOMEN

The rate of movement of women into jobs outside the home has been phenomenal. Today, a majority of women are in the work force. Labor force participation by women increased from 37.7 percent in 1960 to 51.6 percent in 1980 [21, p. 381]. Women now comprise 43 percent of the total labor force [21, p. 381]. Moreover, the trend has been particularly marked in recent years among married women and women with children. There are now more wives with jobs outside the home than full-time homemakers. For married women with their husband present, labor force participation climbed from 30.5 percent in 1960 to 50.2 percent in 1980. This figure has reached 60.1 percent for married women between 25 and 44 years old. For married women with their husband present and one or more children less than six years old, labor force participation has more than doubled since 1960, going from 19 to 45 percent in 1980 [21, p. 388].

These changes have significant implications for the economy, the home, and the types of products and services demanded by consumers. In particular, Gary Becker added the concept of a time constraint to the household's budget constraint. He also showed the importance of the value of an individual's time in explaining consumer behavior [1]. The woman, who is employed outside the home, has extremely heavy demands made on her time, especially if she is a mother with children at home. Her working time, on the job and at home, may well be in excess of 60 hours per week. Employed married women cut back somewhat on their hours of housework, but still retain primary responsibility for the operation of the household. In 1975, the average number of hours per week of housework was 44 for unemployed married women and about one-half as much for those employed [7, p. 11].

These circumstances help explain the increased demand for products that either economize on time in the household or provide commercial substitutes for household activity. The microwave oven, whose primary attraction is the reduced cooking time, is an example of the former. Day care for children is an example of the latter. There were 7.5 million children needing care during the day in 1980. Estimates are there will be 40 percent more young children with employed mothers by 1990 [3]. Companies, such as Children's World and Kindercare, have sprung up to meet this demand. During this recession with its high unemployment, though, many day care centers have seen enrollment declines [10]. Interestingly, speciality stores and catalog firms appear to be other beneficiaries of the increased work force participation of women. Working women, who have more money and less time, appear to buy more by mail and at speciality shops, not having "time to run around the mall" [4]. And, of course, the increased consumption of convenience foods and meals away from home are a well-known consequence of these factors.

Twenty-two percent of employed women held professional and managerial positions in 1978 [7, p. 13]. Many of these women are members of a dual-earner household, in which their spouse is frequently also a professional. The combined salary of two professionals produces a household with a relatively high income level, which can often afford considerable discretionary spending. Young women, in this group in particular, have delayed marriage and delayed, or decided against, children. Nearly three-fourths of the women 20 to 24 were married and one-half had children in 1960; whereas only one-half were married and only one-third had children in 1980 [5]. When they do have children, time becomes very scarce for these women, but they typically can spend considerable money on the goods and services associated with child rearing.

On the other hand, a significant group of employed women are concentrated among families, in which the husband's income alone was proving inadequate. In the 1970's many lower and middle income families found themselves under considerable pressure in their attempt to improve, or just maintain, their standard of living. These women are largely employed in the relatively low paid occupations traditionally dominated by women. The largest category of employment for women continues to be clerical, accounting for more than one-third of all jobs held by women [7, p. 13]. Even with two wage-earners, many of these families do not have much leftover to spend, after covering necessities. Many of these women have temporarily become the sole breadwinner for their families during the current recession, particularly because of the high unemployment rate among men in blue-collar jobs.

The value of unpaid work in the home is not counted as part of national production. Officially treating household production as valueless has distorted assessment of the economy. The total value of household work by adults in the U.S. in 1976 was estimated at $752 billion, based on a specialist-cost approach, which was 44 percent of the GNP [12, p. 17]. When a family buys hamburgers at a fast-food place, the value of the labor involved in cooking and preparation is counted in the GNP. However, if the family cooked at home, the time spent in preparing the meal would be given no official economic value. As women have shifted their work out of the home and into the office and factory, and purchased goods and services have replaced household activities, the increase in national output has thus been overstated, as has the gain in the welfare of consumers.

INCREASED ECONOMIC UNCERTAINTY

Looking at the last decade or so, one change in the economic environment that stands out is the heightened uncertainty confronting consumers. During much of the 1950's and 1960's the economic norm was typified by low inflation, low unemployment, fairly steady economic growth, and low interest rates, with mortgage rates as low as 5 percent. One really cannot be blamed for looking back nostalgically at a period of such relative economic stability and certitude. In the last ten years, the economy has gone through 2-1/2 recessions, counting the dip in 1980 as a half. However, the current recession should probably be counted as more than one, because of its severity and longevity. There have also been two oil price shocks in the last decade; now there is the possibility of a precipitous decline in petroleum prices. Recently there has been a sharp reversal from double-digit inflation to disinflation, with prices actually declining at the gas station and supermarket during some months.

Given this economic setting, who would be so bold as to try to predict the economy's future. However, decisions on major consumer purchases, if they are to be rationally made, require consumers to make assumptions about future economic trends.

Choosing the right size car to buy requires an assumption about future gasoline prices. Deciding whether to rent or buy a house requires assumptions about what may happen to interest rates and inflation. If you guess wrong about gasoline prices or interest rates, you may be buying the wrong car or housing. Yet no one can predict the future course of the economy with any real surety. Faced by such uncertainty, consumers have become cautious in their spending.

Other factors, in particular high interest rates and now the recession, have contributed to consumers holding back on their purchases, especially for big ticket items. Interest rates of 17 percent for new car loans and for mortgage rates in late 1981 and early 1982, not surprisingly, chocked off auto and housing sales. High unemployment affects not only the income and consumer spending of those laid off, but the expenditures of those who are employed are also inhibited by a fright factor. Twenty percent of U.S. families were impacted by unemployment in 1982 and another 20 percent were afraid unemployment might hit them [8]. The various measures of consumer confidence, which have since rebounded somewhat, fell to very low levels in 1982.

Under the weight of these effects, sales of new single-family homes fell to 413,000 units in 1982, the fewest in the 20 years which the government records cover, although a housing recovery appears to have begun toward year-end [22]. The average car's age increased from 2.86 years in 1979 to 4.25 years in 1982, as consumers responded to these factors by slowing their purchases of new vehicles and holding onto their current cars [20].

At the same time such spending cutbacks were indicating the consumer's caution, further evidence was provided by the attempt to improve their financial position. Consumers have cut their installment debt load from nearly 20 percent of disposable income in 1979 to 15 percent at year-end 1982 [5]. The savings rate, which was as low as 5 percent at times in the late 1970's, has climbed to 8 percent. And Elizabeth Allison of Data Resources argues that the real savings rate is close to 12 percent [11]. This difference exists because savings are calculated by subtracting consumer spending from earnings. And earnings do not account for unreported income or the "underground economy", which have become increasingly larger factors.

Consumers have, in addition, responded to this environment by changing their shopping behavior. Consumers are stressing quality more in their purchases and also searching for bargains. In the grocery business both warehouse stores and deluxe supermarkets, with special items and services, seem to be very viable retailing approaches given these consumer attitudes. The Dayton Hudson Corporation, as another example, has done very well, with their Target discount stores appealing to the bargain oriented and their upbeat department stores to the quality oriented. Retailers with middle range quality and prices have not faired as well. In many cases, middle-class households may follow a bargain hunting shopping strategy for one product and a quality seeking approach for another.

An overall comparison of the economy in the 1950's and 60's, with the 1970's, and the 1980's thus far, is not very favorable for the latter period. Arthur Okun developed a discomfort index, which is calculated by simply adding the inflation rate and unemployment level. That index, which is now over 14 has not been below 12 since 1972. During the last ten years the index has averaged about twice its level in the 1960's. The index was never higher than 7.4 between 1961 and 1964 [13]. Government's attempts to deal with one component of the discomfort index have produced sharp increases in the other. The challenge to economic policy is to get both inflation and unemployment down simultaneously.

Even with recovery from the current recession, only the more optimistic are predicting a return to the kind of stable, non-inflationary economic growth enjoyed previously. Consumers will likely have to continue to deal with a very uncertain economic environment in the 1980's. The next decade will undoubtedly contain significant economic surprises. Making the right consumer choices will not be easy. Even with the relevant information, consumers will still have to make, or accept someone else's, guesses about an uncertain economic future. The prudent consumer will probably continue to operate with more caution than would be required in a more certain economic environment.

CLOSING REMARKS

One might fairly ask what the topics covered in this presentation portent for the future. Thankfully, since my crystal ball is missing, such ponderings will not be attempted. In closing though, let it be said that each of these four major topics was chosen because the author views them as significant long-run trends. They should have substantial implications for consumers and consumption, similar to the effects already witnessed, and covered here, well into the foreseeable future.

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NEW TRENDS IN HOUSING: PUBLIC POLICY

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ABSTRACT

This paper presents a discussion of current policy trends affecting the housing of low income and elderly households. Increasing capital reinvestment in cities and the development of community based housing options for the elderly are addressed as examples of the increasing role of state and local government in the development of housing policy for these population subgroups.

How well we are housed is of obvious importance not only to us as individuals but to communities as well. The quality of housing and of neighborhood environment is important not only when we look at society as a whole, but also when we examine disaggregated segments of our population. It is especially significant to the elderly--because they spend more time at home and in their immediate neighborhoods than younger households do. Housing for the elderly is increasingly important to policymakers, because the elderly now vote and their numbers are increasing. Similarly, the quality of the housing stock for the low income has become a public policy issue in a liberal society; perhaps for different reasons. The poor have few choices and in contrast to the elderly, fewer advocates, today. In general, though, housing and neighborhood environment is important to all of us because it is a significant measure of the quality of life. Because it concerns all of us, it also concerns our legislators.

There are some notable new trends in housing policy which warrant mention in a forum such as this. They are policy related issues that effect a restructuring in the demand for housing and reflect a change in the focus of housing policy decision making. There are two phenomena I would like to address.

The first is the back to the city movement or the increasing capital reinvestment in inner cities which a number of observers have noted is taking place in many urban centers today.

The second is the development of a variety of community based housing options for primarily, although not limited to, the elderly.

The back to the city movement or the increase in neighborhood revitalization activity is a phenomenon whose results have been observed in portions of our older cities. What is apparently happening is a resurgence of interest, on the part of younger households of more income and wealth, to live in or near the urban core. This neighborhood revitalization influences housing in a number of ways, posing a major dilemma to policy planners and others concerned with community revitalization. Neighborhood revitalization efforts center in older residential areas with properties in need of maintenance and repair. This primarily private renewal and revitalization effort has been called "the first success among many efforts to rehabilitate inner centers. Private urban renewal is being successfully accomplished in areas where public expenditure efforts have failed" (Zeitz, 1979). It is believed that with revitalization comes an increase in the municipal tax base, an improvement in services and the physical rehabilitation of deteriorating areas.

Herein lies the dilemma. Evaluation of the effects of neighborhood revitalization or capital reinvestment in inner city housing is not value free. As properties are renovated, property values and speculative activity in the older in-need-of repair areas may increase. The total number of housing units as well as the number and proportion of available rental units may be reduced. As this occurs, the cost of housing to both owners and tenants increases.

The rehabilitation and renovation of areas of predominantly lower income housing by higher income/higher status groups is often referred to as "gentrification" in the literature. Coupled with gentrification, the renovation and rehabilitation of older residential buildings has been linked with displacement. Broadly defined, the term displacement describes involuntary household moves which are not due to problems or changes internal to the household. Neighborhood groups or advocates for the inner city low-income and elderly, express the fear that the process of "saving" the neighborhood, former residents will be displaced. They question: "saving the neighborhood--but for whom?"

There have been changes in Federal policy that may be linked with encouraging the process of neighborhood revitalization. More activity today, however, seems to center in local policies that guide these revitalization efforts. The changes in policy direction have come in two areas--housing and historic preservation.

Until recently, there has been rather extensive involvement at the federal level in the provision of housing for the low income. These include programs such as Section 231, 202, 236, 221d3, 232, the rent supplement program, Section 10 and Section 8. As we all know--Federal policy in this area is changing. The direction of federal housing policy today is to rely far more heavily on private market initiatives. From the federal level we hear the terms "filtering" and reference to "trickle down" to describe the sources of low income housing. One implication of this reliance upon the private market to supply low income housing on the part of the federal government is that states are becoming increasingly interested and concerned with the provision of an adequate supply of low cost housing. In turn, policies established at the state and local levels are far more likely to have significant impact on the quality of housing for the poor.

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Examination of inner city neighborhood revitalization also requires inquiry into the development and policy changes regarding historic preservation. In the early years (1935 onward) both national policy and private activity in historic preservation focused on preserving and restoring individual buildings and significant sites. The National Historic Preservation Act of 1966 expanded the early mandate and broadened the application of the historic preservation program to include districts. As a result, residential structures owned and occupied as private property became eligible for participation in a variety of programs. The Tax Reform Act of 1976 and the Revenue Act of 1978 provided economic incentive through federal funding for preservation activities. They provided tax incentives for the rehabilitation and re-use of buildings in these historic districts. The Economic Recovery Tax Act of 1981 included even greater economic incentives for rehabilitation of historic buildings for commercial, industrial and rental residential uses.

At the local level, municipalities across the country have established historic preservation policies. These are frequently in the form of design or architectural review standards for property rehabilitation and are often legislated as amendments to local zoning ordinances. The restrictions imposed at the local level may, in fact, be more powerful in effecting neighborhood revitalization activity and population change than the Federal incentives--given current market conditions.

There appears to be a linkage between neighborhood revitalization and historic preservation. LeGates and Murphy (1981) have pointed out that "the areas being gentrified tend to be in areas with historically elegant units in deteriorated, but salvageable condition." Myers (1978) has suggested that "the significance of historic districting is its use as a tool of community revitalization in many places that are not "historic" in the traditional sense, but rather, "interesting." The expanded concept of historic districting means that older neighborhoods are no longer ignored but "have been elevated to areas planned for revitalization and development under the auspices of 'Historic Preservation District'" (Myers, 1978).

An important question about gentrification, displacement and neighborhood revitalization is the change in the cost of housing which is traceable to the effects of historic preservation property rehabilitation policy. It can be argued that historic preservation is a component of housing policy. However, since federal preservation policy is within the domain of the Department of the Interior, the housing implications of such rehabilitation activity are neither acknowledged nor known.

While widely publicized, the realities of the process of neighborhood revitalization have received little formal analysis. The very scale of the phenomenon and its impact on the various segments of our society have been much more the target of folklore than the recipient of systematic research. There is no agreement in the literature concerning the extent of gentrification and the resulting displacement of households in the U.S. and there is no information on the effects of displacement. Displacement, may, in fact, result in improved housing conditions for low income residents. If so, advocates for inner city low income populations would be doing a disservice by calling for anti-displacement strategies. In addition to the impacts of federal preservation policy, the impact of the adoption of local regulation governing historic districts is not known. Is policy developed at this level really discrimination disguised as environmental protection?

On the other hand, policies may serve to have economic benefits to the community as a whole. For example, the tax assessment base may be increased while at the same time low income and elderly residents may be displaced. Without information it is difficult to evaluate the results of these policy developments from any perspective.

The recent federal cut backs in housing programs make it particularly important that we understand the impact of preservation policy on housing. Federal cut-backs in funding for housing in all phases--new construction, rehabilitation, and rent subsidies for low income and elderly populations will significantly effect the supply of low income housing in both urban and rural areas.

Since the President's Commission on Housing (1982) has recommended that the Federal Government: (1) free the market to produce housing, and; (2) adopt a policy of "filtering." It is important to examine how both historic preservation tax incentives and local designation and preservation restrictions work on the market to effect housing. What happens to the supply of low-income housing, frequently in older structures, if these older structures are the target of rehabilitation and renovation? Put another way: What happens to the residents of older neighborhoods? What is the result for low income residents if housing policy relies on older structures to provide low cost housing and environmental policy encourages their restoration, rehabilitation and "upgrading"? Until we know how public policy decisions such as these impact the supply of housing in older neighborhoods, decision makers will remain uncertain which policy instruments will produce the desired effects.

A second area of relatively new trends in housing--is the recent growth in interest in the development of housing options for the elderly at the local level. Although many of the ideas are not new in themselves, the widespread public interest in the development of these options is a rather new phenomenon. These housing options focus primarily on the community resident elderly--those seniors who are living independently in the community. These comprise the majority of the senior citizens in the United States today.

There are at least three developments in housing options for the elderly receiving widespread interest. The first is home sharing. The second is the development of secondary units, and the third, the development of home equity conversion plans. These trends appear to accomplish several objectives:

1. They incorporate the demonstrated preferences of older residents--to "age-in-place."
2. They reflect the fact that large amounts of funding for new construction is unlikely in the near future; and,
3. They make use of existing resources.

These options address the issue of the financial burden of housing costs. The burden of housing cost is a problem particularly acute for elderly renters. It is, however, a problem for homeowners as well. As the cost of property taxes, utilities and maintenance increase, housing costs are taking an increasingly larger portion of household income of homeowners as well as renters. While these costs are increasing and the expense of housing is a burden, recent research results tell us that older community residents do not want to move. That they prefer, yet are finding it increasingly difficult, to age-in-place.

Home sharing is one option that addresses these issues. It is the housing situation that results when two or more unrelated people pool resources and share a home. Shared housing enables older people to age-in-place and remain independent in the community. It is believed that both housing costs and social isolation are reduced and that emotional and physical supports are increased. For communities, shared housing can be a strategy for neighborhood and property stabilization. Shared housing also addresses the problem of shortage of affordable housing. There are two basic methods of developing shared housing:

- Match up - where a person with excess space in a house or apartment shares with one or two others.
- Group Residence - where a group of unrelated people form a household and share expenses and a single dwelling unit.

There are approximately 300 such programs in the United States today. Yet, we have no information about the number of people participating in these programs, the effect on the quality of life, or on the housing market in general. Does home sharing free housing units for younger families? Does it help restructure the demand for housing? Are people better housed? It is clear, however, that the development of home sharing programs is primarily occurring at the local level. Interest in assisting community resident elderly remain in the community, with perhaps the concurrent goal of restructuring the demand for housing, is a community based phenomenon. The main barrier to the implementation of these programs, however, may be in local policy itself. Local zoning regulations frequently restrict the number of unrelated individuals who may share a single dwelling unit. There are to-date no federal or state policies to encourage or guide the development of such programs.

The second development in housing options for the community resident elderly is also a local phenomenon and is even more directly related to local zoning ordinances. Accessory apartments are secondary units that are developed within existing single family homes. Estimates of the number of accessory apartments nationwide are staggering. The Bureau of Census estimates there may be as many as 2.5 million accessory apartments across the country. The main opposition to permitting the development of these types of units and to development of granny flats (small secondary units added outside--but on the same property as the primary residence) is the fear that they inspire neighborhood decline. The, as yet, unanswered question is: How will single family neighborhoods change if secondary units are permitted? The critical problem is answering questions about the development of both types of secondary units is to determine if neighborhoods change because of them--or if, in fact, they make neighborhoods better places to live.

In many areas schools are closing because of declining enrollments, yet in some areas enrollment is increasing. Many communities, particularly in the suburbs, however, are one generational and are exhibiting great fluctuation in the demand for services. Secondary units enable neighborhoods to be occupied by people in various stages of the life cycle and can help smooth out these dramatic shifts and provide neighborhood stability and continuity.

Secondary units and shared housing permit the development of informal social supports. Services can be exchanged in lieu of rent. There is an increased sense of security with others near by or in the same house. Both young families and elders should benefit. Measurement of these qualitative variables is not easy.

The social benefits of these housing options appear to have implications for long term care as well. It costs approximately $1,800 - $2,000 per month to keep a person in a nursing home or health care facility. Granny flats, accessory apartments and shared housing are far less costly. Living independently in the community is thought to be far more beneficial to the quality of life than residence in a nursing home. Secondary units also allow the frail elderly to receive support from either children or tenants while still maintaining separate households. We need to examine means to develop secondary units from the perspective of enriching the quality of life in single family neighborhoods. Information from communities with large numbers of these units will inform us of the benefits to both families and communities of intergenerational living and of the effect on neighborhood quality.

A third development in the area of housing options for community resident elderly is home equity conversion. Some older homeowners would like, or need, additional capital to maintain or improve their homes, pay property taxes, meet increasing utility costs, or for other expenses. The equity represented by a house puts many elder homeowners in the position of being property-rich-but-cash-poor. The traditional way of converting the equity of a house to cash is for the homeowner to sell and move. But, older homeowners who represent approximately three-quarters of elderly headed households express high degrees of satisfaction with their homes. As research has demonstrated, most do not want to sell and move. A number of ideas for converting home equity into income have been put forth. During the past few years, housing and financial specialists have been developing mechanisms to do this.

The major methods are: the Reverse Annuity Mortgage (RAM); split equity and sale/lease back arrangements; and the deferred payment loan. In all of these programs, the equity of the house is converted to cash either as a lump sum or as a monthly payment. While these options offer opportunities for some people there are also costs and risks associated.

Since home equity conversion is both complicated and confusing, it is important that appropriate consumer safeguards be provided. Care is needed to minimize the financial risks faced by elderly homeowners and the potential for failure or fraud in plans developed. For most, home equity is the single most valuable resource. Once it is depleted, there may be no other resources. There is an increasing public interest to make certain that the rights and interests of elderly homeowners are protected. Homeowners considering conversion require counselling and legal advice in order to fully understand the potential consequences of equity conversion decisions. If older homeowners are to make intelligent decisions (1) the instruments offered need to be fully and straightforwardly explained, (2) when more than one type of plan is offered the alternatives should be presented in a comparable fashion.

Comparing plans is not a simple matter. But there are criteria upon which a consumer can compare plans. These include, but are not limited to: initial cash payment; rate of return on investment; net monthly payments; present value of expected payments; equity position of the homeowner at term or after a specified period of time; tax status of payments; term and duration of monthly payments; the amount and terms of any annuity; any prepayment penalties for revoking the agreement; and, the disposal of the property at the end of the term or at reappraisal of property value. Given lack of federal leadership in this area, consumer safeguards such as these call for the development of policies at the state level.

For reverse equity and deferred payment loans, the following information should be disclosed: loan-to-value ratio; the right of the lender to escalate payments or change the term of the loan; equity position of the borrower if death occurs prior to term; rights of the homeowner on the sale of a loan to the secondary market, and agreement on situations such as temporary move-out or diminished capacity of the homeowner. A loan plan including an annuity should compare the rate of interest the annuity earns with the mortgage interest rate to make certain that the annuity will yield sufficient income for the homeowner.

In split equity and sale/lease back arrangements older homeowners rights of lifetime tenancy under the lease should be protected. The lease should protect the homeowner against situations that could force him or her out of the home. Adequate safeguards should be provided to protect the seller in case the buyer defaults on the mortgage or monthly payments.

Until recently, public policy regarding housing options for the elderly relied on the construction of new units and the relocation of older residents to senior citizen housing. The development of these community based housing options has dramatically increased the proportion of the senior population whose housing concerns are being addressed. Yet, we do not know what the incorporation of these programs will mean for the nature of our communities (both in the long run and short run) or for the large number of "baby boomers" who will be seniors by the year 2010. It is clear that more research is needed.

More research is needed in the area of neighborhood revitalization as well. Neighborhood revitalization movement may have begun with federal incentives for the physical improvement of places. Local controls, however have become increasingly important and may in fact be more significant in guiding neighborhood revitalization efforts today. The emphasis of policy at both levels was and still is, however, place oriented. In focusing on places and physical structures--historic preservationists have not been particularly sensitive to people. Both federal and local policies leave the question of housing for low income residents unresolved.

Other questions also remain. While, neighborhood revitalization efforts are increasing in number, variety and impact, they are primarily a result of private market activity. The role of historic district designation and local law is, however, being studied. The examination of the social and economic effects of place oriented policies is important for designing policies that meet the needs of community residents. There is also increased concern for displacement, yet we do not know how much involuntary displacement there is and really do not know long term effects of "displacement" on the well being of households. Longitudinal studies of changing neighborhoods will provide answers to the questions of: Who benefits from the rehabilitation of existing housing? Who benefits from the overall improvement of neighborhoods? and, What happens to the displaced?

In one way, neighborhood revitalization and the development of housing options for elderly are new trends in housing. At the same time, these developments are examples of the shift in the locus of policy development from the federal to the state and local levels. The significant new trend in housing is the increasing attention that housing policy activity is receiving at the state and local levels. As state and local governments struggle to develop policies, there is clearly a need for more research and for the application of the results of that research to public policy. Research can help guide public policy at these levels as governments develop agenda and search for suggestions for programs in areas that are new to them.

Our state and local governments do not have much experience in housing policy. The policies that are developed at these levels will guide our future environments. If policies have any effect at all, the programs and infrastructure that result will either support or inhibit the quality of life we want. Decisions that are made today will have long term effects. The economic and social effects of place oriented policies need to be examined and evaluated. With the shift in focus of policy development both academic research and consumers should have new opportunities to help guide the development of those policies.

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RECENT CHANGES IN FINANCIAL MARKETS SERVING CONSUMERS

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ABSTRACT

This paper argues that inflation has been a driving force in shaping recent changes in the financial markets facing consumers. During the last 15 years, inflation has altered the savings opportunities available to consumers and the behavior of consumers' credit markets in ways that can broadly be characterized as favorable. However, evidence that the next few years promise price stability gives reason to question whether such advances will be sustained.

INTRODUCTION

While consumers participate in the equities and corporate debt markets, often indirectly through pension and insurance intermediaries, their most direct involvement in the financial markets is through personal savings and consumer credit. Aside from their obvious importance to consumers, the savings and credit markets influence capital formation and levels of aggregate demand that drive the economy as a whole. Conversely, macroeconomic factors in the broader economy have caused profound changes in the financial markets serving consumers.

This paper analyzes recent changes in the consumer savings and credit markets. It argues that the roots of those developments lie in the inflation of the last two decades and, particularly. in consumers' considered responses to that price instability. After offering tentative conclusions about the specific impacts of past inflation on the savings and credit markets, the paper examines prospects for future price stability as the United States shifts from a policy of rapid and repeated debasement of its currency to an apparent commitment to a new monetary ethic. It pronounces no judgment as to the wisdom or equity of the extreme policy remedials that have brought the United States to this juncture. Instead, it argues that consumer analysts must aspire to a greater understanding of how consumers have accommodated past inflation in their saving and borrowing behavior if they are to discern what a future which promises price stability holds for consumers.

PERSONAL SAVING

During the past two decades inflation has been largely responsible for the broad expansion of savings and cash management alternatives available to consumers. More precisely, the rapid emergence of innovative accounts and savings institutions represents the culmination of an on-going tension between Regulation Q, the Federal Reserve System provision that sets maximum nominal interest rates paid on bank deposits, and inflation, which has moved market rates of interest to previously unknown levels. In providing interest rate ceilings on bank accounts, Regulation Q during the 1950's and 1960's has served the interests of banks and savings and loan associations because, while those institutions collectively favor lower rates on deposits, each institution has an individual incentive to offer higher rates in order to attract new deposits.[2] Unbridled, such competition would have been costly to the banking industry but under Regulation Q competitive inducements have historically been limited to offerings of cookbooks, piggy banks, and stuffed animals. As was true in the airline, brokerage, and trucking industries prior to their deregulation, the evidence is quite clear that Federal authorities enforced an artificial rate structure that was less favorable to consumers than rates sustainable in a competitive, unregulated market.[3] Banking regulators fixed interest rates in a way that would have been illegal under Section 1 of the Sherman Act had the industry done so itself.

During the middle and late 1960's, passbook rates of 4 and 5 percent became unacceptable in the face of pronounced and prolonged inflation. This caused consumers who could afford the minimum purchase of $10,000 to withdraw funds from depository institutions to purchase Treasury bills and agency securities bearing market rates of interest. The resulting flee of funds from banks and thrift institutions imposed severe liquidity problems for those financial intermediaries. Figure 1 bears evidence of this financial disintermediation beginning in 1966 and 1969, when record high interest rates coincided closely with a shift by consumers away from holdings of time and demand deposits because the rates paid by depository institutions were fixed. Throughout the 1970's the proportion of savings put in such deposits moved inversely with interest rates available in the money markets.

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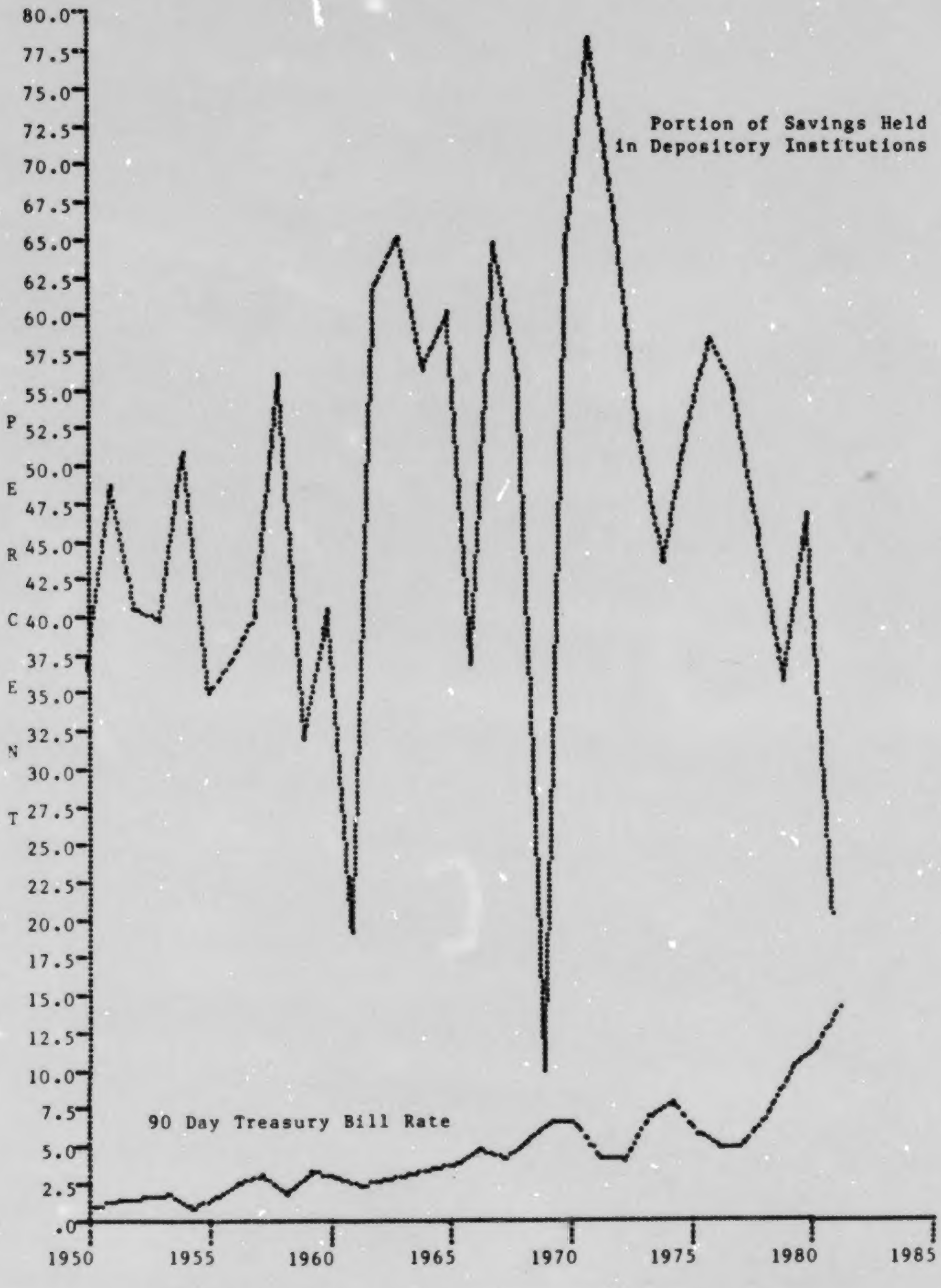
[1] Associate Professor of Agricultural Economics

[2] Originally provided for in the Banking Act of 1933, Regulation Q is being phased out in stages between 1980 and 1985 under the Depository Institutions Deregulation Act of 1980. Responsibility for regulation of deposit interest rate ceilings has been given to the Depository Institutions Deregulation Committee [4, p. 530].

[3] In the case of consumer savings, of course, the Federal government has had a particular interest in maintaining artificial prices because the Treasury was itself a primary outlet for consumer savings through its Series E savings bond program which, like bank savings accounts, offered consumers rates of interest significantly below rates available to commercial lenders and wealthy consumers. See Phillips [3].

FIGURE 1. Disintermediation in the United States



While this behavior by consumers was entirely rational and bears evidence of the market's propensity to circumvent artificial constraints, periodic spells of disintermediation shook banks to their roots since many of their funds were invested in illiquid, long term loans. To stem the tide of disintermediation, institutions began offering certificates of deposit with rates pegged to the T-Bill rate. Initially, these were available only to large depositors but eventually minimum deposits came within the range of consumers in more modest circumstances. However, the appearance of small C.D.'s gave consumers only limited access to the money markets because those instruments denied savers liquidity by specifying 2 to 8 year maturities and associated early-withdrawal penalties.

In the late 1970's, consumers gained full access to the money markets once again despite, rather than because of, Federal authorities and the depository institutions they regulate. Beginning in 1974 and gaining full force in 1978, stock brokerage houses and mutual funds offered money market funds to individuals which combined market rates of interest and full liquidity. Operating under the Investments Companies Act of 1940, rather than under federal or state bank charters, these nondepository institutions have been highly competitive in their interest rates, check writing privileges, credit facilities, and service charges. Because they have paid market rates with total liquidity, many money market funds enabled consumers to combine their savings and checking facilities into one account, merging and simplifying the distinct savings and cash management functions. Through money market funds, consumers gained many of the elements of financial control that were available through depository institutions only to commercial depositors. The significance of these funds has been largely missed in the personal savings literature.

From an aggregate value of $200 million in 1977, money market mutual funds attracted balances of over $200 billion last year. As inflation drove money market interest rates to record levels, a single three month period in 1981 witnessed an inflow over of $100 billion into money market funds from traditional accounts at banks and thrift institutions [5, p. 23]. This unparalleled growth occurred without the benefit of either Federal deposit insurance or the presence of branches in most consumer markets.[4]

So successful have been money market funds in attracting consumer deposits away from depository institutions that in mid-December 1982 the banking industry abandoned its historical opposition to competitive pricing on liquid consumer balances. With the industry's support, passage of the Garn Act enabled banks and savings and loan associations to offer "money market savings accounts." Aside from provisions for a $2,500 minimum deposit and only limited check writing privileges, these savings instruments are competitive with money market funds offered by investment companies. Importantly, they provide consumers access to rates of interest fully reflective of opportunities in the loanable funds market as well as local branches and Federal deposit insurance. They also promise to stabilize both the banking industry and consumer savings patterns by effectively displacing the artificial constraints imposed by Regulation Q.

The response of consumers to the new money market savings accounts, stimulated by special premiums and temporary above market rates of interest, has been impressive: in the six week period ending January 31, 1983, one $10 billion institution reported that $2.3 billion flowed into the new accounts. Approximately 70 percent of funds going into the accounts were reported to be new to the institution and 50 percent were estimated to have originated in money market funds [1, p. 27]. While these belated personal savings innovations are themselves making inroads into the money market funds, they came about only because inflation and its attendant high rates of interest made untenable the traditional opposition of depository institutions to paying competitive rates of return on personal savings. Inflation and consumers' informed responses to inflation were the motive forces for reform in the personal savings market as it moved from the realm of 5 percent passbook accounts to private ownership of Treasury bills, to small savers certificates, to money market funds and, most recently, to money market savings accounts.

CONSUMER CREDIT MARKETS

Although institutional changes have not been as apparent in the consumer credit market as in personal savings, there is at least tentative evidence that price instability has played a significant and unexpected role in altering the borrowing behavior of consumers. The data reveals that between 1950 and the mid 1960's, consumers substantially increased levels of nonmortgage credit in relation to disposable income year after year (Figure 2). During this period, installment and noninstallment credit balances rose steadily from 12 percent to 22 percent of average annual disposable income. The propensity to commit ever-greater proportions of income to previous consumption continued through 1965, with only modest deference to year-to-year variations in consumer income. This pronounced trend led economic analysts as well as authors of personal finance testbooks to conclude that on an inflation-adjusted basis, average per capita credit

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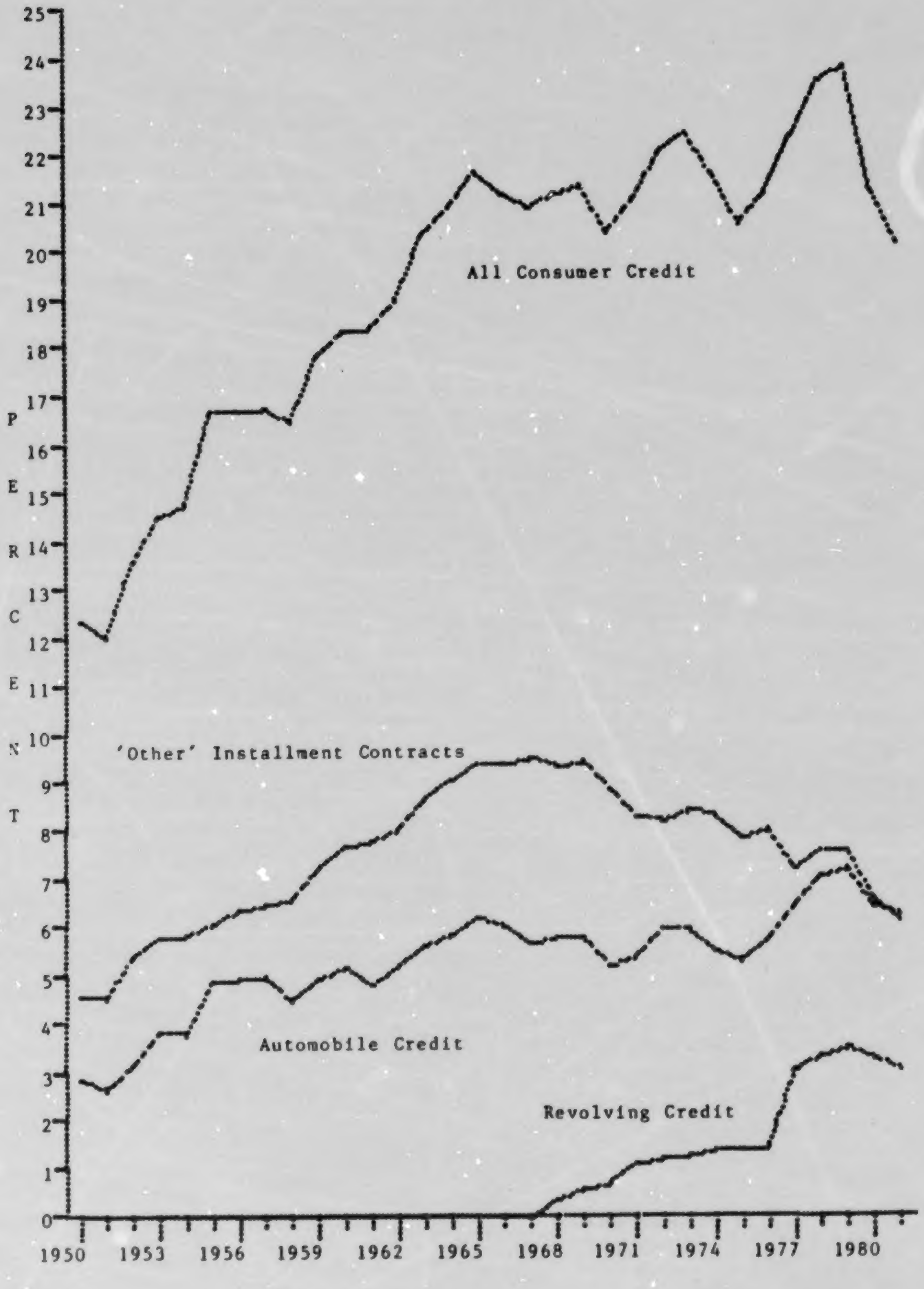
[4] Money market funds, in fact, provide a high degree of security since deposits are invested in short term government debt and rated commercial paper held in trust accounts by custodian institutions. While lacking the imprimature of the FDIC or FSLIC, these highly diversified portfolios would appear to be less risky than those of typical banks, which include a variety of unrated commercial and personal debt, some of which carries lengthy maturities.

FIGURE 2: Ratio of Consumer Credit to Personal Income



balances would continue to double each decade as they had between 1930 and 1960.[5]

These pronouncements notwithstanding, the rapid postwar expansion in credit use ended in the mid-1960's. Thereafter, consumer credit balances appear to have levelled off in relation to income, following a cyclical course about a mean precisely equal to the level first reached in 1965 with peaks and troughs generally corresponding to vicissitudes in personal income. This phenomenon affected all types of consumer credit. After rising rapidly in the 1950's, the 1960's saw automobile credit level off as a proportion of income (Figure 2). While installment contract purchases of other consumer durables (e.g., furniture and appliances) appear to have fallen after 1965, note that the decline was almost exactly offset by the growth of revolving credit for purchases of similar goods as bank cards and department store credit cards came to replace individual loan contracts for major purchases. Overall, credit use for this class of purchases was flat after 1965. With the exception of credit for purchase of mobile homes, a minor factor, no component of consumer credit exhibited growth in relation to income after the mid-1960's. This moderation of consumer borrowing, bearing as it does on both the financial health of consumers and levels of consumer demand in the economy, has received only modest attention.

Economic theory suggests that three primary factors drive per capita credit balances: personal income, interest rates, and price expectations. Higher income is expected to encourage purchases, increasing demand for both goods and credit. Rising finance charges, of course, would have the opposite effect. The potential impact of inflationary expectations, however, is somewhat ambiguous. On the one hand, credit use may be greater in periods of inflation as consumers at the margin are motivated to borrow funds to make purchases before prices rise. However, during pronounced inflations this speculative motive may be offset by the increased risk associated with rising prices. Because inflation heightens uncertainty about the future level of one's real income, it may motivate risk-adverse consumers to reduce their financial leverage in order to be better positioned to withstand future economic adversities.

The importance of personal income as a determinant of credit use is illustrated in Figure 3 where modest variations in personal income are associated with much more pronounced swings in credit balances. Likewise, the inverse relationship between interest rates and changes in real per capita credit balances is very clear (Figure 4) as interest rates rise, borrowing falls and vice versa. This relationship also prevails when changes in credit balances are superimposed on real interest rates--as represented, for example, by the level of finance charges reduced by the trailing three year moving average change in the CPI employed as a proxy for expected levels of inflation. Just as spending behavior is determined by price adjusted variables, so borrowing and lending behavior are influenced by inflation adjusted interest rates.

Changes in income and real interest rates fail to provide an explanation for the tempering of consumer borrowing during the second part of the postwar period. Personal income rose after 1965 nearly in proportion to its increment between 1950 and 1965 and real interest rates actually fell during the later period. However, it is well known that after 1965, rates of inflation were much greater than before. Indeed, few would disagree that this price instability represented the single greatest economic shock to American consumers during the last 40 years.

In order to shed further insight into the role of inflation, a series of regressions was estimated for the 1950-1981 period linking changes in real per capita installment and noninstallment credit balances (C) with changes in personal income (Y), real interest rates (R), and expected inflation rates (P):[6]

Levels:

$$\begin{array}{l} C = -391.81 + 0.37\ Y - 2.88\ R - 10.46\ P \\ \qquad\qquad\qquad (19.51) \quad (1.57) \quad (4.19) \end{array}$$

$$R^2 = .99 \qquad\qquad \text{D.W.} = 1.41$$

First Differences:

$$\begin{array}{l} C = 1.30 + 1.76\ Y - 0.62\ R - 2.06\ P \\ \qquad\qquad (4.76) \quad (2.17) \quad (1.89) \end{array}$$

$$R^2 = .68 \qquad\qquad \text{D.W.} = 1.72$$

In both levels and first differences, credit use appears to be directly related to year-to-year changes in per capita income. Also in accordance with economic theory, real interest rates bear an inverse relationship to credit balances. Finally, borrowing behavior appears to bear a systematic, inverse relationship to changes in expected price levels. This relationship was persistently noted in alternative specifications of the equation

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[5] Only Yeager appears to have observed that consumers were "saturated" with credit [8].

[6] Real interest rates were represented by the rates on consumer installment credit reduced by the three year lagged moving average percentage change in the Consumer Price index. Expected price changes were captured by the three year lagged moving average percentage change in the CPI. In alternative specifications of the relationships, credit use was related to personal income and nominal interest rates. These specifications provided inferior fits, giving little support for the money illusion hypothesis that consumers respond to nominal rather than real phenomena. However, such an interpretation is not at odds with the major thesis of this paper, that inflation alters credit and savings behavior.

FIGURE 3: Change in Credit Use and Personal Income

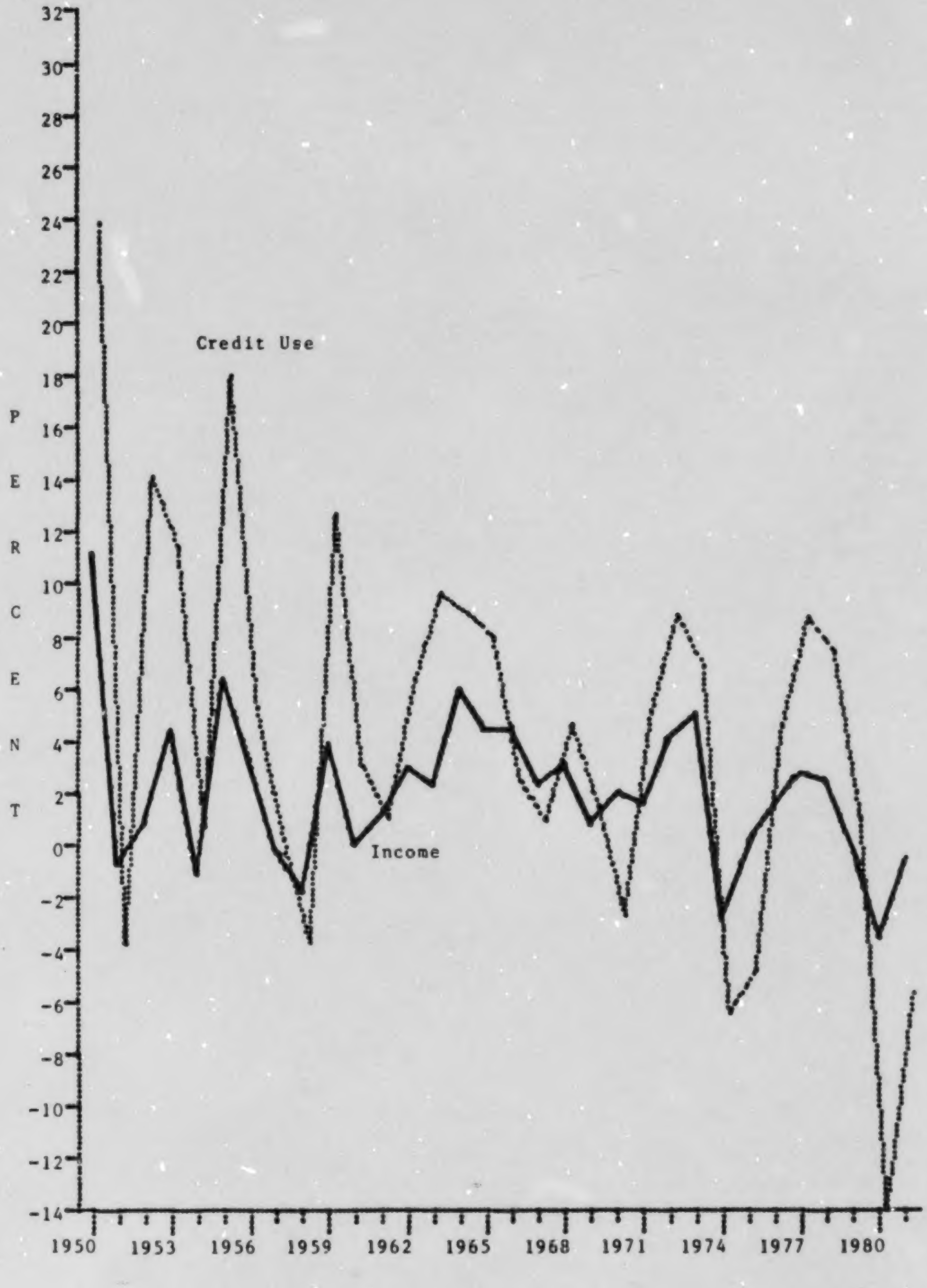
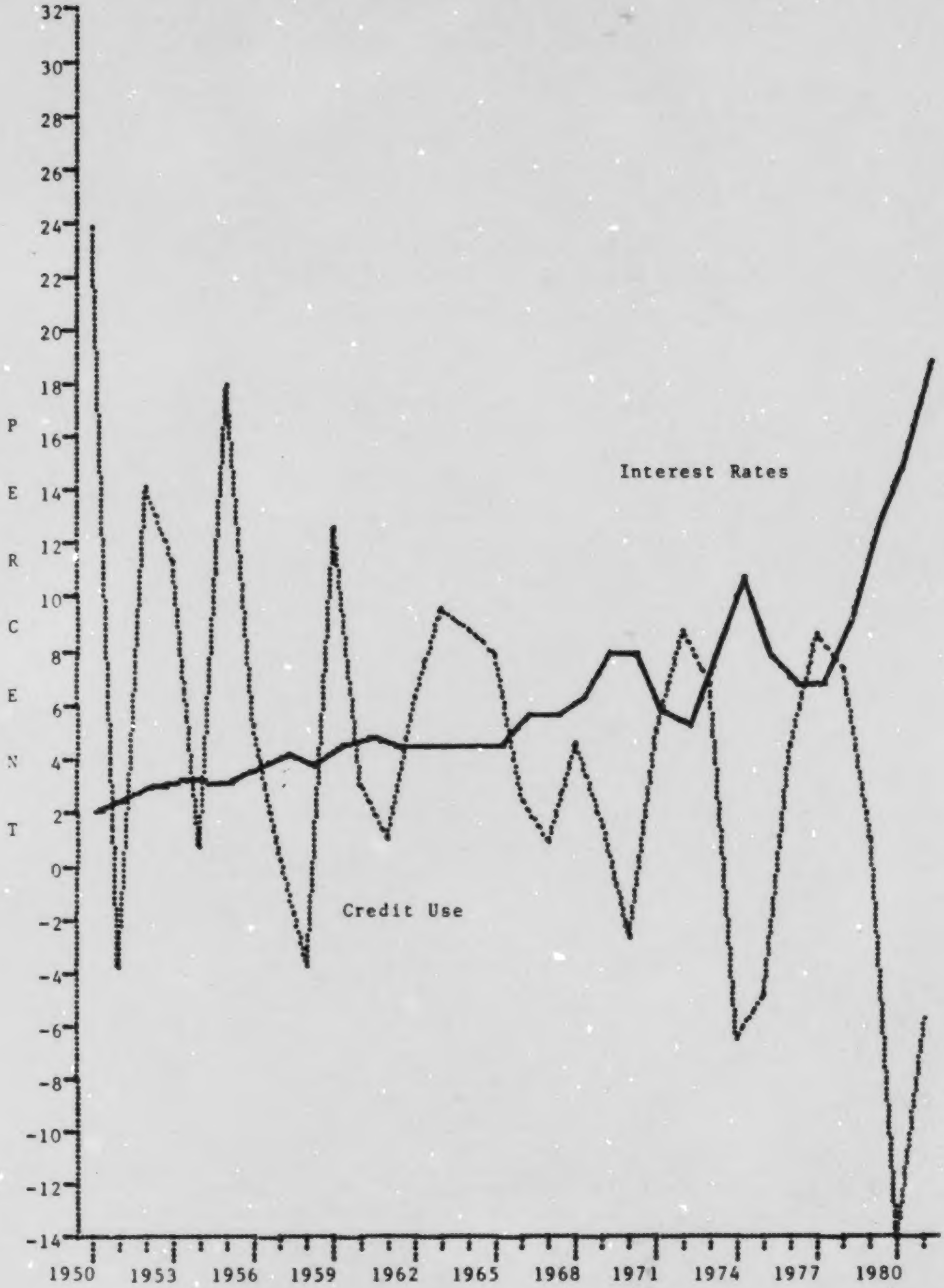


FIGURE 4: Change in Credit Use and Interest Rates



employing different real interest rate and inflation measures. It also prevailed in preliminary analysis of consumer per capita consumer mortgage balances (M):

Levels:

$$\begin{array}{l} M = 515.82 + 0.56\,Y - 8.92\,R - 16.09\,P \\ \qquad\qquad\quad (4.20) \quad\; (1.65) \quad\; (1.68) \end{array}$$

$$R^2 = .99 \qquad\qquad D.W. = 1.44$$

First Differences:

$$\begin{array}{l} M = 43.12 + 8.28\,Y - 16.54\,R - 36.29\,P \\ \qquad\qquad\quad (2.52) \quad\; (2.71) \quad\; (3.06) \end{array}$$

$$R^2 = .68 \qquad\qquad D.W. = 1.84$$

In inflationary times, consumers appear to curtail their exposure to financial risks by reducing their leverage. It is clear this factor swamps the speculative motive to buy more now and pay later when one expects prices to rise.

Improvements could be suggested for the manner in which this rather rough model has been specified. For example, it might be well to examine the question of credit use in a simultaneous environment. Additional attention could also be devoted to analyzing the impact of inflation on various types of consumer credit. Nevertheless, when taken together with the data presented graphically, the statistical results lend at least tentative support to the hypothesis that it was inflation that led consumers in the mid-1960's abruptly to halt their ever-greater propensity to take on nearly all forms of installment and noninstallment debt. They also give consumer economists reason to inquire in their future researches how and why inflation alters the capital structure of the representative consumer's balance sheet.

DISINFLATION

Given inflation's persistent influence in shaping the savings alternatives and borrowing behavior of consumers, it is highly significant that a period of price stability appears now to be upon the United States. Following 15 years of rapid inflation and its attendant maladies--sluggish growth, unemployment, reduced investment and record interest rates--the Federal Reserve System has adopted the creed monetarists have favored for decades by accepting as its target variable measures of the money stock rather than interest rates, money's rental price. While some have very recently voiced concern that the Fed has relaxed its monetary stricture, it is very clear that the policy to date has had its intended impact. Following relative price stability during the 1950's and early 1960's, the Consumer Price Index rose at an average annual compound rate of 7.1 percent between 1965 and 1980. Its average annual increment during the last three years of that period was 11 percent. The G.N.P. deflator for personal consumption, a somewhat less flawed gauge, exhibited a similar performance. However, during the most recent year, the C.P.I. has risen at an annual rate of less than 4 percent. For the first time in an economic generation, consumers in the United States are confronting relative price stability.

In balance, the prospects for disinflation to continue appear to be good. Having come so far at such cost to end inflation, it seems unlikely that monetary authorities will abandon their resolve and once again inflate the economy by increasing the stock of money at a significantly faster rate than the economy's real rate of growth, its increment in output of goods and services. While unprecidented federal deficits loom in the future, the past year illustrates that deficit spending need not be inflationary. In the simplest of terms, inflation occurs when aggregate demand exceeds production. Government spending need be inflationary only if it adds to total demand by printing money, competing with consumers and business for a quantity of goods and services that is fixed in the short run. By adopting money stock targets, the Federal Reserve Board of Governors has put the nation on notice that it will not monetize the deficit. Instead, government deficits will be financed by borrowing, which will raise the rental price of money but need not raise other prices since there will be no net addition to aggregate demand. The increment in demand associated with the excess of government spending over its revenues will merely displace the demands of Treasury creditors who choose to hold bills, bonds and notes rather than goods and services.

The on-going problems of the Organization of Petroleum Exporting Countries promise to reverse another important inflationary pressure. As long as 10 years ago, informed economic opinion anticipated that OPEC's substantial demise would occur during the middle of this decade. While the oil cartel will no doubt continue to have successes from time to time, OPEC now finds itself wrestling with the central problem of mature cartel management: while it is collectively more profitable for producers to operate with a pricing pact than without one, for the individual producer it is still more profitable to "cheat" on the cartel by surreptitiously discounting the cartel's reference price in order to sell more than the producer's allotted market share [6, p. 233]. Ethnic differences and balance of payment exigencies compound this "prisoners' dilemma" problem in the case of OPEC. Economic theory, bostered by the long history of international price and output pacts, illustrates clearly that, while OPEC is not dead, gone are the days that it can double and triple prices. OPEC has clearly seen the apex of its market power.

For these reasons, disinflation appears to be here if not permanently, then at least for a sufficiently long duration as to make it important to understand both the obvious, direct and the more subtle, indirect impacts of price changes on consumer behavior. At first look, one might conclude that the end of inflation, or at least its current hiatus, will be altogether good for consumers. However, note that inflation was not wholely bad. Some consumers benefited measurably from rising prices. To be sure, consumers who purchased and held real estate during the period were tremendously advantaged by inflation. By the same token, those government and union workers whose salaries were tied implicitly or explicitly to the Consumer Price Index made real gains since the CPI unequivocally overstates the costs of inflation due to its fixed weights that disallow the substitution opportunities available to consumers and its treatment of real estate, which assumes that the representative consumer buys and finances a new house each month [2]. It has even been argued, although it is not part of the present thesis, that some elements of the subsidized poor may have benefited in balance from inflation since rising prices led to the phenomenon known as "bracket creep", raising government revenues, making politically feasible the tenfold increase in transfer payments emanating from the federal government during the last 15 years [7, p. 266].

Just as inflation carried hidden benefits as well as its more conspicuous costs, so disinflation can be expected to have differential impacts. For example, the institutional changes in the personal savings markets that for the first time give consumers of moderate means a window on the money markets, have been a product of inflation. Will these advances be reversed if the economic environment of the 1980's continues to mirror the relative stability of the 1950's and early 1960's that made Regulation Q enforceable? By the same token, the important role of price expectations in explaining past credit practices suggests that the new era of disinflation may bring a renewed surge in consumer borrowing. The specter of price stability provides some reason to believe that unrelenting year-to-year growth in credit use in relation to disposable income will once again surface as a most conspicuous feature in the financial markets serving consumers. Perhaps most perplexing is the question of how moderation in inflation will affect consumer spending patterns. How will consumers who are accustomed to 10 percent cost of living salary adjustments react to price and income stability when those past inflationary increments in reality cost them only 5 percent to accommodate? It is well known that the Depression generation was permanently scarred by the 1930's into lives of thrift and fiscal conservatism. Will today's inflationary generation, people who gained economic literacy during the last 15 years of rapidly rising prices, be similarly scarred or will they change their spending habits to reflect the new economic environment?

CONCLUSION

In responding to the economic instability of the last 15 years, consumers have in many venues exhibited keen awareness of the signals the economy has given. They appear to have responded intelligently even opportunistically to incentives and the risks created by the inflationary environment. However, until those responses to inflation are better understood, consumers at least in part will be pictured as confused and irrational actors being buffeted by the unhappy macroeconomic circumstances which they confront. These are decidedly complex matters but few are more worthy of attention by those scientists whose pretensions include some claim to understanding the economic behavior of consumers.

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QUALITY OF GENERIC BRANDS: THE ROLE OF PRICE AND BRAND CUES IN PERCEIVED QUALITY

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ABSTRACT

An investigation of price-quality and brand-quality relationships was made to assess the relative position of low-priced generic brand food products. Results were generally consistent with established relationships for price and perceived quality and brand and perceived quality. However, price-brand choice was not found to be determined by consumer-related factors.

INTRODUCTION

Generics have been making inroads into the markets for many food and household products, and more recently, beer, wine, and cigarettes [25]. Their attraction lies in the 15 to 40 percent savings over private label or store brands and national brand competition. Marketing data indicate generics are primarily cutting into the market share held by private labels and store brands. Evidence from a national opinion survey suggests however that consumers are not indiscriminate about use of generics; some are considered as good or better than branded competitors, others not.

Although more recently attention has focused on objective price-quality relations [5, 20], introduction of generic brands suggests the value of re-examining the role of price and brand cues in consumers' perceptions of product quality. Do consumers see generic brands as extending the existing price-quality continuum or as substitutes for store brands? Does price-brand reliance depend on consumers' perceptions about products and themselves as shoppers?

Numerous marketing studies have examined the role of price as a single informational cue to product quality [2, 8, 9, 10, 11, 12, 13, 16, 17, 19, 22, 23, 26]. In general, the conclusions drawn were: price is consistently regarded as an indicator of quality; the price-quality relationship is often nonlinear; price could not overcome product preferences; and the use of price to judge quality is a generalized attitude. Although price-reliance appears to diminish as other cues are added [18], experiments designed to detect the effect of adding a brand cue have yielded conflicting results concerning which effect is dominant. Several investigators [6, 7] concluded that when the brand informational cue is provided the effect of price is replaced by the effect of brand. Others [1, 24] found the effect of price to dominate that of brand. Differences in conclusions may be related to differences in the types of products used in the several experiments since reliance on price as an indicator of quality appears to vary over products. Use of price and brand cues to guide choice has been found to be more likely in situations of greater perceived dissimilarity among brands [2, 8, 9, 11, 22]. Consumer characteristics have also been found to be associated with price-brand reliance. Consumers who choose the high-priced brand tend to have more confidence in price as an indicator of quality, see themselves as having much experience in purchasing the product and as good judges of quality [2, 4, 8, 9].

The objective of this study was to determine if an investigation which incorporated low-priced generic brands would provide results consistent with those of previous studies of price-brand reliance in ratings of product quality. Specific objectives of the study were: (1) To determine the extent to which consumers rely on price and brand information as cues in evaluating product quality. (2) To determine if price-brand reliance is associated with perception of degree of variation in quality among brands of a product and consumer-related perceptions of confidence in price and brand as indicators of quality, experience in purchasing a product, and confidence in ability to accurately judge product quality.

METHODS

Selection of Products

Food products were used in the study primarily because of greater availability of and consumer experience with generic brands, but also because these are products which are frequently and commonly purchased, relatively inexpensive, and readily categorized according to price and brand level. In a preliminary survey, 52 respondents were asked to use a five-point scale to rate similarity of quality among brands for each of fifteen products; specific brands or types of brands (e.g., national vs store) were not mentioned in these rating procedures. On the basis of the results, four products--all purpose flour, corn oil, catsup, and peanut butter--were selected for use in the main investigations; one criterion for selection was that products represent different levels of perceived similarity among brands. These four products are also frequently and commonly purchased and were available at the three brand levels (generic, store, and national) at the two grocery stores in the town of Fairbury, Illinois, where the survey for the main investigation was conducted.

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[1] Former M.S. student and Assistant Professor, respectively, Department of Family and Consumer Economics.

Instrument

Unlike most previous investigations, which obtained data through experimental methods, this study made use of survey methods. An instrument for collecting data was developed and tested on a random sample of 19 households prior to carrying out the actual data collection. As a result of this pilot study, two questions were eliminated because they did not appear to be measuring what they were intended to measure.

The first four questions, asked for each of the four products, required the respondent to indicate the price-brand combination he would be most likely to choose, to rate how similar in quality he perceived the three types of brands (generic, store, and national) to be, and to rate product quality at the three price levels and at the three brand levels. Ratings of both similarity in quality across brands of a product and product quality (at a given price or brand level) were based on a five-point scale. For rating similarity across brands, 1 indicated all brands alike and 5 indicated no brands alike. For rating product quality, 1 indicated very good and 5 indicated very poor. Then the respondent was asked how confident he was in using price and brand, respectively, as an indicator of quality, how much experience he felt he had in purchasing each product, and how much ability he felt he had in judging the quality of each product. Following these questions were eight demographic questions; demographic data were used primarily for purpose of describing characteristics of respondents in the sample.

The respondent was defined as that person who did most of the grocery shopping for the household. Before respondents were asked to rate product quality, they were asked about their familiarity with types of brands described as national brands, store brands, and generic brands. If not familiar with this classification scheme, the respondent was read an explanation of these types.

Sample

The population for the survey was defined as resident households in the town of Fairbury, Illinois. A random, systematic sample was drawn from the pool of all residential telephone numbers in Fairbury. The sample of 224 households represented about one out of seven or nearly 14 percent of the residential telephone numbers. Twenty percent of households in the sample drawn either could not be contacted (no answer after ten attempts at contact were made in the course of one week or telephone was disconnected) or were ineligible (residents did not do their own grocery shopping). Among the 180 households which could be contacted and were eligible the response rate was 85 percent, producing a final sample of 153 households.

Analysis

Hotelling's T-square statistic [14] was used to evaluate the difference among quality ratings of each of the four products at the three price levels and the three brand levels. For a check on consistency of quality ratings, analysis of variance [3] was used to determine if perceived similarity in quality across brands of a product was associated with quality difference scores across the three price levels and across the three brand levels. The quality difference score for a product was obtained by subtracting the rating of the level (price or brand) which was perceived as having the highest quality from the rating of the level which was perceived as having the lowest quality.

Contingency analysis [3] was used to test for association between price-brand combination choice (i.e., product choice as characterized by price and brand level) and rating of similarity in quality across brands of a product. Another test of this hypothesis was made using the variables quality difference scores for price and brand levels instead of the variable rating of similarity of quality across brands; analysis of variance was used.

The Chi-square statistic was used to measure degree of association between price-brand combination choice and each of four independent variables--confidence in using price as an indicator of quality, confidence in using brand as an indicator of quality, perceived experience in purchasing the product, and perceived ability to accurately judge quality of the product.

Manova, Anova, and Crosstabs were the computer procedures used to obtain statistical results [15, 21]. For each of the statistical tests the probability of making a Type I error was set at five percent.

RESULTS

Respondent Characteristics

In the 153 households surveyed, more than 90 percent of respondents were female and over four-fifths were married. The mean age of respondents was 49 years. On average, both respondents and their spouses had about 12 years of education. About 30 and 55 percent of respondents and their spouses, respectively, were employed full time. Average total household income before taxes was in the range of $20,000 to $25,000. The majority of households in the sample consisted of one or two adults. Elderly households were over-represented and households with children under-represented in the sample.

Variation in Product Quality

Among the four products, all purpose flour and corn oil were those for which brands are considered to be most similar in quality; they received mean ratings of 1.67 and 1.70, respectively. Brands of peanut butter and catsup were perceived to be less similar, receiving mean ratings of 2.16 and 2.33, respectively. Ratings of similarity in quality were not significantly different from those given by respondents in the initial survey used to select products for the main investigation.

Effects of Price and Brand Cues

For each of the four products, the difference among quality ratings at the three price levels was statistically significant (see Table 1). Results indicated that price was positively related to perceived quality, although the relationship was not necessarily linear. For corn oil, peanut butter, and catsup, difference in perceived quality per unit of price between the low- and medium-priced brands was about three times greater than that between the medium- and high-priced brands. The precise opposite was true for all purpose flour.

Table 1. Perceived Quality Ratings by Price Level (N=153)

	Price Level		
	Low	Medium	High
All Purpose Flour	2.81	2.31	1.56
		F=159.75*	
Corn Oil	2.41	1.99	1.35
		F=126.00*	
Peanut Butter	2.75	1.98	1.35
		F=225.54*	
Catsup	3.14	2.32	1.33
		F=333.63*	

*$p < .001$

Results also confirmed the hypothesis that brand was significantly associated with perceived quality (see Table 2). National brands were perceived as being of higher quality than store brands and store brands of higher quality than generic brands.

Table 2. Perceived Quality Ratings by Brand Level (N=153)

	Brand Level		
	Generic	Store	National
All Purpose Flour	2.77	2.28	1.57
		F=146.53*	
Corn Oil	2.73	2.26	1.56
		F=126.61*	
Peanut Butter	3.13	2.30	1.41
		F=227.64*	
Catsup	2.97	2.34	1.44
		F=208.94*	

*$p < .001$

Consumers were consistent in their assessments of quality; those who considered brands of a product to be relatively dissimilar in quality when given no price or brand cue reported larger differences in quality ratings across price and brand levels than did consumers who felt brands are relatively similar. Rating of similarity in quality across brands were significantly related to quality difference scores across both price and brand levels for each of the four products.

Degree of Price-Brand Reliance

Variation in Quality. Results were generally consistent with the hypothesis that the more variation in quality a person perceives among brands of a product, the more he will rely on price-brand cues to judge quality. Price-brand choice and ratings of similarity in quality across brands were significantly associated for all four products. Price-brand choice was also significantly related to quality difference scores across price levels for all purpose flour and corn oil and catsup, but not for peanut butter. A significant association was also found between price-brand choice and quality difference scores across brand levels for each of the four products.

Confidence in Using Price-Brand Cues. For each of the products price-brand choice was not associated with confidence in using price as an indicator of quality. Confidence in using brand as an indicator of quality was significantly associated with price-brand choice for peanut butter only.

Purchasing Experience. Price-brand choice was significantly related to perceived experience in purchasing a product for peanut butter and catsup. This suggests that the more experience a person perceives himself as having in purchasing a product, the more likely he is to rely on price-brand cues in rating product quality.

Ability to Judge Quality. Results did not confirm the hypothesis that the more ability a person perceives himself as having in making accurate judgments of quality for a product, the more likely he is to rely on price-brand cues in making ratings of quality for that product. For none of the four products was there a statistically significant association between price-brand choice and perceived ability in judging product quality.

DISCUSSION

Consumers were found to rely on both price and brand in making judgments about quality of products when generic brands were included in the set of brands examined. This result is consistent with findings of previous studies of the effects of price and brand cues on consumers' perceptions of product quality. No conclusion was possible concerning the relative importance of the two types of cues, however, because of the research design we used.

Consumers were also found to be consistent in their ratings of quality. Those who considered brands of a product to be relatively dissimilar in quality when given no price or brand cue reported larger differences in quality ratings across price and brand levels than did consumers who felt brands were relatively similar.

Based on these results, it appears that consumers perceive generic brands of these food products as extending the existing price-quality continuum. Obviously, for some consumers generics are considered relatively close substitutes for store brands but for the average consumer in this sample are not similar enough in quality to displace store brands. The nonlinearity of the price-quality relationship observed in this study suggests that the savings of 10 to 25 cents per item produced by buying generics rather than store brands--as opposed to savings of 30 to 60 cents between store and national brands--are not sufficiently large to offset perceived loss in quality. This suggests that quality ratings by consumers are not based on an equal interval scale. Consumers may apply more critical standards to judgment of quality differences at the lower end of the price scale.

Support was found for the hypothesis that price-brand reliance is related to the perceived degree of variation in quality among brands of a product; this result is again consistent with those of previous studies. This result was consistently observed except for the product of peanut butter, for which brand but not price cue was significantly related to choice.

Consumer characteristics which the literature suggested would be related to price-brand reliance were not found to be significantly related to price-brand choice in this study, except again for the product of peanut butter. Even in the case of peanut butter only two of the four indicators of consumers' perceptions about themselves as shoppers were significantly related to price-brand choice; these were confidence in using brand as an indicator of quality and perceived experience in purchasing the product. Together with results concerning perceived degree of variation in quality among brands, these findings suggest that consumers are more brand-loyal with respect to peanut butter than the other four products--all purpose flour, corn oil, and catsup. Although there was a significant relationship between experience in buying catsup and price-brand choice, other indicators did not suggest that price-brand reliance is related to consumer characteristics for this product.

Inconsistencies between findings of this research and previous studies might be related to several factors. Survey research methods instead of experimental methods were used to obtain the data. Food products rather than some other type of non-durable or durable products were used. The sample size, while large compared to that for most experimental designs, produced results that were based on a small number of cases in some cells.

CONCLUSIONS AND COMMENTS

Despite its possible limitations, this study was useful in demonstrating that use of low-priced generic brand food products provides results generally consistent with established relationships between price and perceived quality and brand and perceived quality. Choice among price-brand combinations is broadened as a result of the introduction of generic food products. This is consistent with the observation [25] that generics have forced retailers to clarify the price-quality relationships among national brands, private labels, and generic varieties. Consumers who wish to trade off quality and price gain from the introduction of low-priced generic products, especially when products are perceived as being of similar quality across brands.

Assuming the measurement of concepts was valid and reliable, results seem to suggest that brand-loyalty does not operate very strongly for three of the four products. Previous studies yielded more evidence of brand-loyalty. It is not clear whether this finding results from the nature or type of products used in the study, from changes in consumers' perceptions about themselves as shoppers, or the addition of generics to the set of brands.

Measurement problems are a continued plague in research on consumers' perceptions. The validity of measurement of the relationship between price and perceived quality depends on how accurately an interval scale measures product quality perceptions and whether consumers perceive equal price intervals as being equal.

Perceived quality of products will continue to be an important topic for research. Together with research into the relationship between objective quality and price, investigations of the dimensions of quality offer great promise for further understanding of consumer choice.

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BUYING THE LARGEST SIZE: IT'S EASIER BUT DOES IT COST MORE?

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ABSTRACT

As a substitute for unit pricing grocery products, consumers often use the economy size rule which assumes the largest size is always less expensive per unit. Previous research has established, however, that the rule may not always be a valid one. The purpose of this research was to estimate for a selected set of grocery products the frequency with which use of the rule results in dissavings. Additionally, the amount of the dissavings as well as the savings from purchasing the largest size were estimated. Results indicated that among the 19 products surveyed, dissavings occurred frequently and in relatively large amounts for some products, (tuna), infrequently and in large amounts for others (salad and cooking oils), and were virtually nonexistent among others. Recommendations which take into consideration the time costs of shopping are given for choosing an appropriate strategy when dissavings exist.

INTRODUCTION

Consumers are frequently frustrated by the difficulty of making value-price comparisons on the multitude of products they purchase due to the proliferation of products, brands, and sizes. As a substitute for the time-intensive job of securing accurate price per unit information, consumers may adopt the economy size rule. Use of this rule assumes that the largest size is always less expensive per unit.

The economy size regulation of the Fair Packaging and Labeling Act provides some justification for consumers' use of the largest size/less expensive rule [7]. According to the Act, "economy size" or a similar term can be used by a labeler on only one package size of a brand if at least one other size is offered and the price per unit is reduced at least 5 percent from the actual prices of all other sizes. Since the rule only applies to labelers at their points of sale, the cheaper price per unit of the economy size is not necessarily passed on to the consumer. However, the spirit of the Act provides some basis for consumers adopting the largest size/less expensive rule of thumb.

Widrick [5,6] and Walker and Cude [4] established that larger sizes of grocery products are not always better buys than smaller sizes. Specifically, the researchers frequently found instances in which selecting a larger size resulted in dissavings rather than savings. In the three studies, from 18.5 percent [4] to 33.8 percent [6] of the larger sizes were more expensive per unit than smaller sizes. Products for which larger sizes most frequently resulted in dissavings were tuna fish, pork and beans, and dry laundry detergent. Walker and Cude [4] found that dissavings occurred more frequently among larger sizes of laundry products as a class (25%) than on food (16%) or personal care products (14%). Dissavings on larger sizes also occurred more often when a greater number of brand sizes were available and when noninteger size comparisons were required (as 24 ounces and 10 ounces rather than 24 ounces and 12 ounces) [4,6].

Since it is clear that larger sizes are not always better buys, the economy size rule may be invalid for some products. If so, there are potential payoffs to consumers who make unit price comparisons rather than using the rule. However, the absolute dollar amount of the payoff is not known. Since unit pricing requires more time to implement than does the economy size rule, the value of the time required to make price comparisons may exceed the economic gain.

Furthermore, in past research [4,5,6] no distinction was made between dissavings on a larger size and those on the largest size. If a product was offered in four sizes, dissavings identified were those occurring among any of the three larger sizes. Thus, implications for consumers who use the economy size rule are unclear.

It was therefore the purpose of this research to:

1) determine the frequency with which the selection of the largest size results in dissavings for a selected set of products,
2) estimate the absolute dollar amount of dissavings and savings produced by the selection of the largest sizes of grocery products, and
3) compare the frequency with which dissavings occur as well as the absolute dollar amount of savings and dissavings among food, personal care, and laundry products.

In the final section of the paper, guidelines are given for use by consumers in choosing a shopping strategy when dissavings exist.

METHODOLOGY

During the week of October 19, 1981, trained surveyors collected data from 15 grocery stores located throughout Jackson County. Carbondale, population 30,000, is the largest city in the county, a rural area in southern Illinois. Although there were 45 grocery stores in the county, the sample included only the 15 which had multiple sizes in at least 19 of the 23 products. Three of the stores in the sample were chain stores, representing one regional and one nationwide chain; the remaining stores were equally distributed among large and small independents and Mom and Pop stores.

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A two-stage selection process was used to select the 23 products for which data were collected. First, 25 products were randomly selected from among those used by 50 percent or more of U.S. households [1,2]. Secondly, products not occurring in multiple sizes, products not measured in ounces, and those not available in smaller groceries were eliminated. Price, size, and processor information on the final set of 23 products, which included four personal care and five laundry products, was collected. (See Appendix for a list of specific product variants for which data were collected.)

DEFINITIONS AND PROCEDURES

Estimation of Savings and Dissavings

A three-step procedure was used to determine the mean maximum and minimum savings as well as the mean maximum dissavings for each product. First, maximum and minimum savings as well as maximum dissavings were computed for each brand/product variant combination in each store. A product variant was defined as a specification of the form, packing liquid, and packaging of the product. One example of a product variant is chunk light tuna packed in oil. An example of a brand/variant/store combination is Starkist chunk light tuna in water sold at Store A.

Secondly, maximum and minimum savings and maximum dissavings were determined for each product within each store. Finally, an across-store mean was obtained for each product. Each step in the procedure is outlined below.

Step 1. The absolute dollar amount of savings (dissavings) for each price comparison within a brand/variant/store combination was computed as:

$$S(DS) = Oz_L\ (UP_S - UP_L)$$

where $S(DS)$ = savings (dissavings)
UP_L = the unit price of the largest size,
UP_S = the unit price of a smaller size,
and Oz_L = the number of ounces in the largest size.

Price comparisons were made between the unit price of the largest size and each of the smaller sizes in each brand/variant combination. Using Brand X of frozen orange juice concentrate as an example the following computations were made in reference to the largest size at Store A.

Ounces	Item Price	Unit Price	$UP_S - UP_L$	Savings	Dissavings
6	$ .78	$.13	+$.02	+$.48	0
12	1.44	.12	+ .01	+ .24	0
16	1.60	.10	- .01	0	-$.24
24	2.64	.11			

To identify savings (dissavings), three unit price comparisons were made; the unit price of the 24 ounce container was compared to the unit prices of each of the three smaller sizes. Buying the 24 ounce size rather than the 6 ounce size resulted in savings of $.48 [24 oz. x ($.13 - $.11)]. In other words, if purchasing the 24 ounce container rather than the smallest size offered no savings, the largest size would have been priced at $3.12 rather than $2.64. Buying the largest size rather than the 12 ounce size also resulted in savings, amounting to $.24. However, selecting the 24 ounce size rather than the 16 ounce size resulted in dissavings of $.24 [24 oz. x ($.10 - $.11)]. Stated differently, if the unit price of the largest size had been $.10, the item price would have been $2.40 and not $2.64. Thus, for this example, maximum savings from buying the largest size were $.48, minimum savings were $.24, and maximum dissavings were $.24.

Step 2. Maximum and minimum savings as well as maximum dissavings were computed for each product in each store. Within each store, maximum savings for each product were defined as the largest dollar savings possible from buying a largest size in any of the brand/variant combinations in that store. Thus, in the example given above, if purchase of the largest size of Brand X produced savings larger than in any other brand/variant combination, maximum savings for orange juice at Store A would be $.48. Minimum savings for each product were defined as the smallest nonzero savings possible from buying a largest size in any brand/variant combination in a store.

Step 3. For each product, maximum and minimum savings as well as maximum dissavings were totaled and divided by the number of stores offering the product to obtain means.

Frequency of Dissavings

The frequency with which dissavings occurred was computed for each product in a two-step procedure. First, within each store the number of brand/variant combinations with dissavings was divided by the total number of brand/variant combinations. The percent of brand/variant combinations with dissavings in each store was then totaled across stores and divided by the number of stores offering the product to obtain a mean frequency for each product.

Price Comparisons

The number of price comparisons required to unit price rather than to use the economy size rule was also computed. This computation was made by totaling the number of sizes offered in each brand/variant combination and subtracting one. It represented a measure of the time-intensity of unit pricing. The number of price comparisons in each store was then totaled across stores for each product and divided by the number of stores offering that product. Similarly, the number of brand/variant combinations was determined in each store and averaged across stores to obtain a mean for each product.

RESULTS

Table 1 shows maximum and minimum savings as well as maximum dissavings for 19 products. Four of the

Table 1. Mean Dissavings and Savings for 19 Grocery Products in 3 Product Classes.

Products	Mean Savings		Mean Dissavings		Mean Number of Price Comparisons	Mean Number of Brand/Variant Combinations	N of Stores
	Maximum	Minimum	Maximum	Percent With			
Tuna	$.13	$.06	$-.22	50%	6	3	13
Frozen orange juice	.21	.07	-.15	35	9	2	11
Pork and beans	.66	.06	-.11	35	9	2	15
Salad and cooking oils	1.15	.09	-.28	9	17	5	14
Cottage cheese	.16	.15	-.02	9	3	2	13
Saltine crackers	.86	.48	-.00*	8	2	1	13
Shortening and lard	.47	.25	-.02	7	2	2	14
Peaches	.57	.27	-.003	4	5	3	14
Mayonnaise	.80	.34	-.01	3	5	2	12
French dressing	.36	.18	-.002	2	5	3	12
ALL FOOD PRODUCTS	.55	.22	-.08	18	6	3	
Toothpaste	1.58	.22	-.15	24	27	6	13
Mouthwash	3.27	.44	-.24	12	20	4	12
Deodorant	.90	.23	-.001	3	15	7	6
Powder	1.70	.45	-.02	2	5	2	8
ALL PERSONAL CARE	2.03	.34	-.11	14	18	5	
Fabric softener	.56	.10	-.13	41	7	2	13
Liquid laundry detergent	.51	.13	-.25	35	6	2	13
Dry laundry detergent	1.28	.09	-.70	21	24	7	15
Dishwashing liquid	.47	.07	-.09	15	19	6	15
Bleach	1.02	.40	-.01	3	5	2	15
ALL LAUNDRY PRODUCTS	.78	.16	-.24	22	13	4	

*Less than .0005.

original set of 23 products were eliminated because analysis revealed that buying the largest size always resulted in savings, never dissavings. These products were: canned corn and tomato juice, corn flakes, and instant pudding.

Mean maximum savings from buying the largest size rather than a smaller size ranged from $.13 (tuna) to $3.27 (mouthwash) across the 19 remaining products. Minimum savings ranged from $.06 (tuna, pork and beans) to $.48 (crackers). Mean maximum dissavings were highest for dry laundry detergent ($.70) and lowest for crackers and deodorant (less than $.01). On average, buying the largest size of tuna, offered in 13 of the 15 stores, resulted in dissavings in 50 percent of the brand/variant combinations. In contrast, the frequency of dissavings for several products was 3 percent or less (mayonnaise, french dressing, deodorant, powder, and bleach).

The mean number of price comparisons required to unit price and the number of brand/variant combinations are also shown in Table 1. Products with the largest number of price comparisons were toothpaste (27), dry laundry detergent (24), mouthwash (20), dishwashing liquid (19), and salad and cooking oils (17). Products requiring a large number of price comparisons to unit price were also those offered in many brand/variant combinations.

Differences existed among food products. Tuna, orange juice, and pork and beans were the products with the highest frequency of dissavings. Dissavings on tuna and orange juice were substantial compared to most other products, averaging $.22 for tuna and $.15 for orange juice. Savings from buying the largest size rather than a smaller size of tuna and orange juice were also lower than for most other products.

The food product with the largest dissavings ($.28) was salad and cooking oils, although the frequency was only 9 percent. However, large maximum savings ($1.15) were also possible from use of the economy size rule. Unit pricing would require 17 price comparisons in 5 brand/variant combinations.

The remaining food products were generally characterized by small and infrequent dissavings. Although few price comparisons would be required to identify dissavings, savings from using the economy size rule were generally high.

Among personal care products, mean savings from buying the largest size were substantial, ranging from $.22 to $3.27. The frequency of dissavings was 24 percent for toothpaste and 12 percent for mouthwash; unit pricing would require an average of 20 or more price comparisons for each product.

Among laundry products, the greatest savings resulted from purchase of the largest sizes of dry laundry detergent ($1.28) and bleach ($1.02).

Bleach also had a very low frequency of dissavings (3 percent) and dissavings were small when they occurred. In contrast, dissavings resulted from the selection of 21 percent of the largest sizes of dry laundry detergent, with an average maximum of $.70. Twenty-four price comparisons would be required to avoid the dissavings. Fabric softener had the highest frequency of dissavings among laundry products, but a relatively small average maximum of $.13.

Comparison of the overall means for each of the three product classes summarizes the differences that existed. Use of the economy size rule produced the largest mean savings among personal care products, ranging from $.34 to $2.03. Personal care products as a class had the lowest frequency of dissavings and required the most price comparisons (18) to avoid dissavings, which averaged a maximum of $.11.

In contrast, laundry products had the highest frequency of dissavings (22 percent) as well as the largest mean maximum dissavings ($.24). However, savings from buying the largest size ranged from $.16 to $.78. An average of 13 price comparisons would be required to unit price.

Food products as a class required the fewest price comparisons to unit price. An average maximum dissavings of $.08 on 16 percent of the largest sizes of food products would be detected by unit pricing.

ASSUMPTIONS AND LIMITATIONS

Prior to identifying implications for consumers, several assumptions which were made about consumer shopping behavior should be stated. First, it was assumed that time spent in grocery shopping has an opportunity cost. A second assumption was that the primary motive in shopping is economic gain. That is, the consumer wants to purchase the desired items with the lowest possible expenditure of time and money. It is recognized, however, that some individuals view shopping as a game with the psychic rewards of finding the lowest price far outweighing the time costs. Also, consumers who experience great utility from shopping as a recreational or social activity may perceive a low opportunity cost for the time spent.

A third assumption was that consumers perceive no quality differences among the various varieties and brands of a product. This is an invalid assumption for those consumers who are brand loyal and those reluctant to purchase generic and store brands because of a belief that they are of low quality. A fourth assumption was that consumers use a single shopping strategy. In actuality most probably use a combination of strategies -- unit pricing some products, buying the largest size of others, and buying their favorite brand of yet others -- all in a single shopping trip.

A fifth assumption was that consumers have no size preferences. This is not realistic for consumers in small households who may find it practical to purchase only smaller sizes of perishable products due to limited storage space and/or spoilage of leftovers when larger sizes are purchased. However, even in small households, there may be products, such as liquid laundry detergent or toothpaste, for which no size preferences exist.

Finally, the computed savings and dissavings shown in Table 1 assumed both unit pricing and the economy size rule were applied with 100 percent accuracy. Five research studies have shown error rates in unit pricing ranging from 34 to 54 percent (3). Although the economy size rule is simpler, errors may also occur in its implementation. If errors were made in the use of either strategy, the savings would be lower than those reported in the results.

IMPLICATIONS FOR CONSUMERS

In choosing a strategy, consumers probably consider its cost-reducing potential as well as the amount of time required to implement it. Although numerous strategies are available, two were considered in this research. One, unit pricing, assures the consumer of the maximum savings possible (if computations are accurate) although it often requires much time and numerous price comparisons. The time required depends, of course, on the individual's expertise and whether unit prices are posted. A second strategy, buy the largest size, is relatively simple and quick to implement, although savings may be lower than unit pricing when the largest size is not the best buy.

The results indicate that, for some products, the largest size is rarely more expensive than a smaller size. For six of the food products studied, unit pricing, requiring from 2 to 7 price comparisons, would identify dissavings in at most 9 percent of the brand/variant combinations, reducing costs by only a few cents. In the personal care category, an average of 15 price comparisons would be required to unit price deodorant; in only 3 percent of the brand/variant combinations would savings result, averaging less than $.01. For products such as these there appears to be no economic advantage to unit pricing rather than using the economy size rule, especially when the value of the shopper's time is considered.

On the other hand, if a consumer used the economy size rule to buy tuna, dissavings would result in 50 percent of the brand/variant combinations. Only 6 price comparisons would be necessary to unit price, avoiding dissavings which averaged a rather substantial maximum of $.22. Therefore, even consumers who place a high value on their shopping time might find it worthwhile to unit price tuna rather than to buy the largest size.

Dissavings also occurred in relatively large amounts among salad and cooking oils, toothpaste, mouthwash, and most laundry products. However, in contrast to tuna, consumers who value their shopping time may choose not to make price comparisons since 15 to 20 would be required for most of the products. To choose a strategy the consumer would have to evaluate the economic loss that would occur by buying the largest size in relation to the time costs of unit pricing.

Table 2. Sizes, Prices, and Unit Prices of Items Offered in Toothpaste and Liquid Laundry Detergent in a Local Supermarket.

TOOTHPASTE

Brand 1

Size	Item Price	Unit Price
8.2 oz.	$2.05	25.0¢
6.4	1.67	26.1
4.6	1.43	31.1
2.7	1.03	38.2
1.4	.67	47.9

Brand 2

Size	Item Price	Unit Price
8.2 oz.	$1.89	23.1¢
6.4	1.42	22.2
4.6	1.33	28.9
2.7	.99	36.7
1.4	.63	45.0

Brand 3

Size	Item Price	Unit Price
8.2 oz.	$2.05	25.0¢
6.4	1.67	26.1
4.6	1.43	31.1
2.7	1.03	38.2

Brand 4

Size	Item Price	Unit Price
9.5 oz.	$1.99	20.9¢
7.0	1.39	19.9
5.0	1.33	26.6
3.0	1.03	34.3
1.5	.67	44.7

Brand 5

Size	Item Price	Unit Price
7.0 oz.	$1.54	22.0¢
5.0	1.33	26.6
3.0	.99	33.0

Brand 6

Size	Item Price	Unit Price
6.5 oz.	$1.37	21.1¢
4.7	1.15	24.5
2.8	1.26	45.0

Brand 7

Size	Item Price	Unit Price
6.0 oz.	$1.63	27.2¢
4.3	1.39	32.3
2.6	1.03	39.6

7 brand/variant combinations
27 price comparisons
  12 item price
  15 noninteger
16 unique sizes

LIQUID LAUNDRY DETERGENT

Brand 1

Size	Item Price	Unit Price
128 oz.	$6.53	5.1¢
64	3.15	4.9
32	1.54	4.8

Brand 2

Size	Item Price	Unit Price
128 oz.	$7.39	5.8¢
64	3.89	6.1
32	1.69	5.3

Brand 3

Size	Item Price	Unit Price
128 oz.	$7.19	5.6¢
64	3.43	5.4
32	1.84	5.8
16	1.02	6.4

3 brand/variant combinations
9 price comparisons
  5 item
  4 integer
4 unique sizes

Factors other than the opportunity cost of time spent in shopping may also influence the choice of strategies. The frequency with which a product is purchased may be a relevant factor. If a consumer purchases orange juice three times a week and each time uses the economy size rule to select a large size with dissavings of $.15, for example, total annual dissavings would be $23.40. In this situation, the consumer may find it worthwhile to periodically unit price to determine if dissavings exist. On the other hand, if a product is purchased infrequently total losses due to dissavings may be quite low in comparison to the value of the time required to unit price.

Secondly, the choice of strategies may also be influenced by the complexity of the purchase decision. Consider Table 2, which shows the brands and sizes of toothpaste and liquid laundry detergent that might be offered in a local supermarket. Seven brands of toothpaste are shown compared to three brands of liquid laundry detergent. Assume first that unit prices are posted. It would seem that finding the lowest unit price among the 28 brand sizes of toothpaste, although possible, would require more time than locating the best buy among the ten choices of liquid laundry detergent.

Consider, however, what the consumer faces if unit prices are not posted. Without a calculator and an excellent memory the authors believe that many consumers, including themselves, would be at a loss in choosing toothpaste. Of the 28 offerings, 16 are unique sizes. Additionally, only 12 of the 27 price comparisons are item price comparisons (comparing the item prices of two 8.2 ounce tubes for example). All of the remaining 15 comparisons are nonintegers (comparing the item prices of a 6.4 ounce and an 8.2 ounce size). When the sizes in which a product is offered differ across brands and when package size ratios are nonintegers, price comparisons become difficult and time consuming for some consumers and impossible for others without posted unit prices.

In such situations many consumers may choose to use the economy size rule, selecting the 9.5 ounce size of Brand 4. If so, dissavings of 9.5¢ (9.5 oz. x 1¢) would result. When the purchase decision is complex, even knowing dissavings are present many may choose to use a simpler strategy when unit prices are not posted.

In contrast consider the purchase decision for liquid laundry detergent when unit prices are not posted. The sizes offered across brands are consistent, with only four unique sizes. Additionally the sizes offered within each brand are integer multiples. As a result, five of the nine price comparisons are item price and the remaining four are integers. To compute the price per 32 ounces rather than the price per ounce seems easier and the possibility of accuracy seems greater than in the toothpaste example. Furthermore, if the economy size rule is used, dissavings of 38.4¢ (Brand 1: 128 ounces x .3¢) would result. Since price comparisons are relatively simple, it may be worthwhile to compare prices to avoid the dissavings.

In summary, the presence of dissavings suggest shoppers who use the economy size rule incur monetary losses. Therefore some may find it worthwhile to compare prices periodically for items they regularly purchase using the rule. Realistically, however, many consumers who value their shopping time may choose the simpler strategy when unit prices are not posted and the purchase decision is complex.

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APPENDIX

Below are listed the varieties of the 19 products for which data were collected. Single items in unique containers were excluded from data collection in all product categories.

Products	Varieties
Canned tuna	Chunk and grated light, solid and fancy white
Frozen orange juice concentrate	Sweetened and unsweetened
Pork and beans	All varieties except beans with added seasonings
Salad and cooking oils	Vegetable, corn, and sunflower oil
Cottage cheese	Large and small curd, 4% and lowfat
Saltine crackers'	Salted, boxed
Shortening and lard	All varieties
Canned peaches	Cling, freestone; sliced, halves, and whole; light and heavy syrup
Mayonnaise	All varieties
French dressing	All varieties
Toothpaste	Flavored and unflavored regular toothpaste
Mouthwash	Flavored and unflavored
Deodorant	Scented and unscented roll-on
Powder	Baby, body, medicated, and cornstarch powders in shake-on containers
Fabric softener	Liquid regular and concentrated
Liquid laundry detergent	Regular and concentrated
Dry laundry detergent	Regular and concentrated
Dishwashing liquid	Regular and concentrated
Bleach	Liquid; all varieties

VALUE ADDED: ACCOUNTING FOR MORE THAN TIME USE IN PREPARATION OF FOOD IN HOUSEHOLDS[1]

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ABSTRACT

The study explored the potential of estimating value added to food within the household through such inputs of labor and management, household durables, and fuel. The data source was the 1977-78 USDA Food Consumption Survey. The mean weekly value added per household was $40.28 in 1977. The most important predictor of value added was whether the female head was employed outside the home.

The study of household time use is not a new idea. In the 1920's the United States Department of Agriculture's Home Economics Bureau sponsored studies of household time use of farm women. Wilson's (18) study was a quite intensive investigation of tasks and time use of Oregon farm homemakers. Both Wilson and Margaret Reid were students of Hazel Kyrk, a family economist at the University of Chicago. Reid's doctoral dissertation culminated in a book, The Economics of Household Production (10).

Throughout the years, home economics researchers have continued to study time used in household activities (4,16,17,13,14,15). More recently, a USDA-sponsored study of household time use was carried out in 11 states (12). Sociologists and others also have begun examining work done in the home (11,2).

TIME AND ECONOMIC THEORY

Economics had, in general, rather ignored time use until Becker (1) prepared an essay that included time as an input in the production process. Becker stated, "At the heart of the theory is an assumption that households are producers as well as consumers; they produce commodities by combining inputs of goods and time according to cost-minimization rules of the traditional theory of the firm," (1, p. 516). Resources were measured by Becker as "full income", which is the sum of money income and income foregone while producing commodities for direct consumption. Commodities were seen as being "more" than goods and services. They could consist of such activities as "seeing a play", for example. Thus, utility could be obtained from "activities" as well as goods and services.

At about the same time, Lancaster (7) offered his theory that it is the characteristics or attributes of goods and services that provide utility -- not the goods and services, themselves.

Michael and Becker (8) further reformulated the traditional consumer behavior theory by specifying a household production function that included production within the home, but also extended it to all non-market activities.

The recognition of the importance of time was exhibited in several empirical applications of the household production-function approach. Principal applications were in three main areas: (a) fertility and marriage decisions, (b) human capital development and education, and (c) the use of nonmarket time, including time spent in leisure activities. Many applications were done by people closely associated with the University of Chicago as staff or students, such as Gary Becker, Robert Michael, Reuben Gronau, James Heckman, Marc Nerlove, T. W. Schultz, Robert Willis, and others. Nerlove christened the household decision-making framework, "the new home economics" (9).

Researchers and educators in the field of home economics have been rather uncomfortable with the unofficial, yet rather widespread, use of Nerlove's term. Their discomfort arose, first, because of his use of a term (home economics) already in use with other meanings, and which encompassed many areas not dealt with in the analyses by those from the Chicago school -- such as textiles, clothing, food and nutrition, education in home economics, and housing, to name a few. Second, it implied that this was an improvement over whatever the "old" home economics was; and third, because, in many respects, it wasn't new at all. Home economics researchers had been studying household time use for years. And they also had recognized that household activities result in satisfaction (utility). Nevertheless, the ideas of Becker, Lancaster, Michael, Gronau, and others have provided some important contributions from which economists, home economists, sociologists, and others can benefit.

The study of time use is important: it is necessary to "open up" the household to observe what is being done, how long it takes, who does it, and what the result is. Time, however, is only one aspect of household production. Production within the household, as within the firm, has a number of inputs. Only one of these is labor and management (for which time provides the unit of measurement).

Household members combine labor and management time with raw materials, capital in the form of durable goods, and other inputs such as fuel to produce goods and services for use by family members.

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[1] Journal Paper No. J-10836 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa. Project No. 0165. The study was done under a cooperative agreement with SEA/CR, USDA, Ruth E. Deacon, Principal Investigator. It was a contributing project to Interregional Research, National Agricultural Research Planning and Analysis Project (IR-6).

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VALUE ADDED IN HOUSEHOLD PREPARATION OF FOOD

The national accounts use the value-added approach to measure the production occurring within each firm. Such an approach seems appropriate for measuring production or preparation within the household. Hawrylyshyn (5) suggested that:

$HVA = f(L, K, I)$

where HVA = household value added,
L = labor and management inputs
K = capital in the form of durable goods,
and I = intermediate inputs.

This is the form used in the national income and product accounts. If production within the household is to be viewed in the same way as production within the firm, it seems logical to use the same general form, that of value added.

The value-added approach measures only the value that is added at any particular location or stage of the production process. Thus, value added in the household is accomplished by adding inputs to the product in whatever form it enters the household. Such inputs are labor and management, capital in the form of durable goods, and intermediate inputs such as fuel. This approach avoids double counting of value contributed by inputs.

PURPOSE AND METHOD

The major purpose of this study was to develop a method for estimating the value added in the transformation of food into meals by households.

The data source was the 1977-78 nationwide Survey of Household Food Consumption conducted by the United States Department of Agriculture. After being cleaned, the data set consisted of information from 11,036 households.

The method developed for estimating value added can be expresses as:

$X = V - R$, where
X = Value added by the process of meal preparation in the home; and
$V = U \times I$ with,
U = Average price of meals eaten away from home
I = Total number of meals eaten by family members from home food supplies; and
R = Money value of home food supplies used to prepare meals at home, adjusted, where applicable, for food-stamp and WIC subsidies.

The imputed value for a given family's meals at home was based on that same family's average expenditure for meals it purchased away from home. This imputed value was used for two reasons. First, it was considered appropriate because it was based on the food-purchasing behavior of each household when its members purchased meals away from home. Thus, it reflects food preferences of that household rather than preferences that might be reflected in group data. Secondly, restaurant prices of meals were not available. Third, it reflects prices of the community in which each household lives, works, and spends.

One obvious limitation of using this method for imputing values to home-produced meals is that it was not possible to ascertain just which meals were eaten away from home and the relative quality of home-produced food and purchased meals. The Household Food Consumption Survey data were not amenable to such a determination. Industry sources, however, indicated that overall, more lunches are eaten away from home and that about equal numbers of breakfasts and evening meals are eaten away (6). Because an ascending order of prices is likely for breakfasts, lunches, and dinners, the average price of meals away from home seemed to provide a reasonable approximation under an assumption of equal quality on the average.

Although the major purpose of this study was to develop a method for estimating value added to food within the household, an attempt was made to partition that value added into its various components. This would allow examination of the value of labor and management inputs independent of the time spent and also make it possible to compare this study with others that place a value on time of household workers. The return to labor and management was calculated by subtracting out capital and energy costs from the value-added figures.

Capital costs were calculated by compounding a passbook rate of return over their life expectancies on the stocks of small electrical and major kitchen appliances, glassware, china, and utensils, then dividing that compounded value by the appropriate life expectancies of the various items. This resulted in a capital consumption allowance of $4.12 per week per household that includes both capital consumption and return to capital invested. The use of opportunity costs as a proxy for return meant that most of the returns to capital were offset by the inflation present during that period.

Surprisingly, data on fuel usage costs for food preparation are practically nonexistent. In this study, annual usage estimates were constructed (mostly from unpublished data) to reflect kilowatt hours of electricity or cubic feet of gas consumed by each appliance. These then were multiplied by the mean price paid by households in 1977 per unit of fuel. Each household was assigned a percentage of those annual costs to reflect the percentage of ownership of each appliance in the population as a whole. Fuel allowances then were summed to arrive at a fuel allowance per household. This resulted in an estimate of $124.14 annually per household for fuel allowance. Expressed on a weekly basis, it is $2.39.

FINDINGS

When a multiple regression analysis of value added on household characteristics was done, the most important predictor of value added in the household was whether the female head was employed outside the home (Table 1). In those households where the female head was employed outside the home, the value added was significantly lower. This was the case whether or not there was also a male head present in the household.

TABLE 1. Multiple regression of value added on respondent characteristics

Variable	b	Beta	F
Female Employment[a]	-19.31	-.17	208.26*
Income	.21	.04	11.28*
Age of Head	.29	.09	47.04*
Family Size	3.64	.11	68.87*
Education of Head		.00	.04
Constant 23.16			
R^2 = .05			
F = 80.29*			
df = 5 and 7435			

[a] Coded (0) not employed (1) employed
*Significant at the .001 level

The mean value added in households where the female head was employed was $31.25. In households where the female was not employed the mean value added was $51.25. In addition, the more hours she worked, the less the value added. What contributed to this? Was it because employed females purchase more convenience foods? Do households with employed females eat less meals at home and more away?

As shown in Table 2, households that had an employed female head spent about the same weekly on food at home ($47.73 vs $46.57 for the households in which the female head was not employed). However, they ate fewer meals at home. Therefore, the cost per meal at home was higher for the households with employed female heads (93¢ vs 85¢). Indeed, the actual cost spread between the two in terms of cash outlay may have been even larger, because the value of home-grown food was included in the "cost" of food at home.

Households that had employed female heads ate more meals away, but spent less for each meal. They ate slightly fewer meals at home, but approximately the same total number of meals as those households with females not employed. Thus, households that had employed female heads ate a higher percentage of their meals away from home.

The mean weekly value added to food in 1977 over the entire United States sample was found to be $40.28 per household. After subtracting an allowance of $4.12 for capital in the form of durables and $2.39 for fuel inputs, the remaining value added is $33.77 per household. This is the portion that consists mainly of returns to labor and management.

Other researchers have attempted to measure the value of labor and management inputs by ascertaining time spent in various household tasks and assigning a dollar value to the time expended (14). Recently, time spent in household activities was examined in 11 states (12). That study was limited to households composed of two parents and two children under the age of 18. Although samples were selected randomly within sampling areas, only certain areas within 11 states were studied. Thus, exact comparisons cannot be made between that study and ours. However, some comparisons may be of interest. In our study, the mean value added weekly in households of four that had both male and female heads was $44.56. After an allowance of $6.51 is subtracted for durables and fuel inputs, value added attributable primarily to labor and managerial inputs is $38.05.

TABLF 2. Comparisons of value added, numbers of meals, and costs in households where the female head was employed and those where the female head was not employed.

	Households with Female Head Employed	Households with Female Head Not Employed
Mean Value Added	$31.25	$51.25
Mean weekly cost of food at home	$47.73	$46.57
Mean cost per meal at home	$ .93	$ .85
Mean cost per meal away	$ 1.85	$ 2.25
Mean number of meals away weekly	12	6
Mean number of meals at home weekly	51	55
Mean total meals eaten weekly	63	61

In the regional household time-use study (12), it was found that two-parent households with two children under the age of 18 in the Syracuse, New York, area spent a total of 17.5 hours per week in food preparation and dishwashing activities (3). If our $38.05 weekly value added attributable to labor and management is divided by 17.5 hours, the imputed hourly wage would be $2.17. Utah families in the same regional study spent only 15.28 hours per week in food preparation and dishwashing activities (3). After $38.05 is divided by mean hours from the Utah sample, the hourly imputed wage is $2.49. Legal minimum wage in 1977 was $2.30.

No allowance is made here for joint production, however. Within households, several commodities or services often are produced simultaneously; for example, laundry, child care, planning, or cleaning may be taking place while food preparation is occurring. Our imputed figure is the dollar value added to food within the home -- not the total value of commodities produced within a given time period. In addition, minimum wages or any other stated wage rates are subject to taxes; returns to labor expended by household members within the household are not.

IN RETROSPECT

Use of the value-added approach to valuing household production seems to hold much promise. First, it includes other inputs as well as time in estimates of the value of productive activity within the household. For example, such things as managerial inputs are included. In addition, joint production is not as much of a problem because the only thing being determined is value added in a productive activity such as meal preparation. Therefore, it is not necessary to try to separate out other activities that household members do simultaneously with the preparation of meals.

Clearly, one implication that flows from this analysis is that, as more women enter the paid labor force, it is likely the value added through the process of meal preparation has declined. Evidence on women in paid employment is more complete than that on the trend in value added, so the relative magnitude of two is not known. However, because in this study the influence (negative) of female head employment on value added is so salient, it seems likely that a decrease in the value added in the home has, in effect, to some degree offset the increase in GNP that has been reflected by women's movement into paid employment. Thus, GNP figures uncorrected for concurrent changes in traditionally non-measured economic phenomena such as value added in meal preparation overstate changes in real economic well-being to some extent.

Better estimates of contributions to value added could be made, however, if better information were available about household inventories, including true ages, prices, and life expectancies of small appliances, cookwares, and miscellaneous kitchen supplies in use in each household. Also, improved data about energy usage within the home would make possible better estimates of costs to attach to those inputs. Information about prices of comparable restaurant meals would be useful along with accurate information on serving size and number of servings. This information could serve as a check on estimates generated internal to the data source such as was done in this study, adding to the reliability of the estimates.

The value-added approach is an alternative to valuing household production through time inputs. None of the approaches for valuing household production, including this one, are able to capture either the important qualitative dimensions or the differences in efficiency between households. Better information at least would allow improved quantitative extimates by households as producers.

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MEASUREMENT OF THE VALUE OF TIME: A MODEL

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ABSTRACT

A measure of the marginal value of time is not observable in all activities. However, the econometric model presented here is fitted to data for all individuals--wage earners and other, disabled and able-bodied--to provide empirical estimates of wage offers for head and spouse from Black and non-Black households.

INTRODUCTION

A measure of the value of time in nonmarket activities is now possible using new methodological techniques of labor economics and econometric model-building. The new household economics has provided a methodology useful in measuring the value of time --which in equilibrium would be equal across all uses. The empirical measure of the marginal value of time is the wage offer derived from estimation of a modified wage equation.

The value of time is an important determinant of resource allocation. In the current economic environment nonmarket time commands attention. Likewise, continuing concern regarding exclusion of the value of nonmarket production from national accounting of Gross National Product (GNP) becomes more intense. If nonmarket contributions to household and consumer welfare are to be measured, it is an imperative first step that measurement of the value of time in nonmarket production be accomplished.

Measuring the value of time is the scope of this paper. The econometric model and empirical evidence presented here use a multi-stage estimation procedure. The purpose of this paper is twofold: 1) to provide insights into the methodological background on which the wage offer equations are based and 2) to present the empirical model fitted using econometric techniques for measuring the value of time. Section one presents the methodological considerations including a discussion of selection bias. Section two contains a discussion of the data set, sample, empirical definition of variables and empirical specification of the econometric model. Empirical results are presented in section three. Section four contains the summary.

I. SELECTION BIAS AND STATE-OF-THE-ART METHODOLOGY

Researchers are familiar with bias. The most frequently encountered bias is from questionnaire response. When particular segments of the population respond and others do not, the problem arises. Characteristics and traits of the respondents are not randomly assigned to the groups, i.e., the respondents are not a representative sample of the population. This is, of course, titled response bias. Another, less obvious or familiar, source of bias is selection bias. Examples of selection bias provided by Heckman [5, p. 153] help to point out the extent of potential bias:

> ...one observes wages for union members who found their nonunion alternative less desirable. The wages of migrants do not, in general, afford a reliable estimate of what nonmigrants would have earned had they migrated. The earnings of manpower trainees do not estimate the earnings that nontrainees would have earned had they opted to become trainees.

Until the mid-1970's the practice in empirical research was to estimate wage functions based on samples of employed individuals only. The problem of an unobserved wage, i.e., the marginal value of time, was alleviated if only those reporting hours in the labor market and, therefore a wage rate, were included. An alternative procedure was to impute a wage to nonemployed persons from a wage equation estimated on a sample of workers. This was necessary, once again, due to the absence of data on the value of time for nonwage earners. Today it is recognized that if one estimates a wage equation using a sample of working individuals bias results. This is because the same set of variables that determine wages enter as a criterion for sample eligibility. The estimated wage function confounds the true wage function with the rules for inclusion in the sample [3, 4, 5, 6, 11, 12]. Heckman provides an insightful example [4, p. 477]:

> If the presence of children affects the work decision but does not affect market wages, regression evidence from selected samples of working women that women with children earn lower wages is not necessarily evidence that there is market discrimination against such women or that women with lower market experience--as proxied by children--earn lower wages. Moreover, regression evidence that such extraneous variables "explain" wage rates may be interpreted as evidence that selection bias is present.

Most empirical data regarding sample selection bias in wage equations is based on women. This is due to the higher proportion (relative to men) of nonemployed time use and current interest in the worth of household production. Ordinary least squares (OLS) regression was used to estimate the imputed wage based on the wages of workers. While, as will be explained below, the wage offer can also be estimated using OLS, a correction for selection bias must be included. Empirical estimates of the imputed wage exceed the mean wage offer for women by from 5.3 percent to 11.1 percent [12, p. 16]. An imputed wage predicts the same wage for an individual regardless of whether he/she participated in the labor force. The bias is most severe when wages are imputed to the nonemployed [12]. Studies by Heckman [6] and Hanoch [2] indicate that OLS imputed wages for nonparticipant women overestimate the true wage offer by more than 20 percent.

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Much of the econometric work on labor supply of women in recent years has dealt with alternative methods of estimating wage and labor supply functions that are free of this selection bias. To resolve the problem of bias, when estimating the wage offer, requires understanding the decision to be or not to be in the labor market. Heckman [3] provided a major methodological contribution in labor supply estimation by identifying the relationship among components of labor supply: participation, wages and hours worked. This initial approach used a nonlinear maximum likelihood function to estimate the set of parameters underlying the function determining probability of working, hours of work, the observed wage rate, and the shadow price of time--wage offer. Although Heckman's original statistical method was a significant methodological advancement, it was quite expensive to implement and, therefore, not used in applied research.

Heckman [4, 5] presents selection bias as a variant of specification error. This second method requires two-stage estimation using a probit model. The probit equation estimates the probability of sample inclusion using a curvilinear estimation technique. Once again, the procedure is complex and moderately expensive.

The procedure became practical when Olson [11] developed a linear probability model to make the correction. The advantage of Olson's model is that it requires OLS regression techniques to estimate the correction factor rather than an iterative probit. The correction factor is the probability of having been included in the sample on which the modified wage equation is estimated. Then, using OLS, the estimated probability is used in modified wage equations as the missing variable--instrumental variable--when the wage rate of labor market participants is regressed on the demographic and economic characteristics known to effect marginal productivity of individuals. All estimated parameters, except the ones used to correct for potential biases, are then used to estimate the wage offer of all individuals whether they are wage earners or not.

The first source of selection bias considered in this paper involves the employed/nonemployed status as it relates to measuring the value of time for all individuals. If, as should be assumed, individuals choose other time use alternatives than labor in the market for a wage because of differential characteristics and preferences between wage earners and these other individuals, then the nonrandom differences must be accounted for. The observed differences in wage offers for persons with identical demographic and economic characteristics must not be systematically related to the market labor supply decision--the work/nonwork decision.

A second source of selection bias may exist in the estimation of the wage offer due to disability not being a random occurrence in the population. Consistent with Heckman's previous discussions of selection bias, if the disabled and the able-bodied are not homogeneous in other characteristics, the disabled, therefore, would not face the same wage offer as others, even if they were able-bodied [1].[2] To simply include a dummy variable, e.g., 1=disabled, 0 =able-bodied, in the modified wage equation is to ignore the fact that workers must be able-bodied to work.

Olson's [35] technique as employed here enables the researcher to use the estimated probability of being a wage earner (see equation 1) and the estimated probability of being able-bodied (see equation 2) as missing conditional means for each observation. These estimated conditional means are utilized as regressors in the modified wage equations for head and spouse (see equations 3 and 4).

Therefore, the entire sample can be used to estimate the wage offer, i.e., marginal value of time. As a result, the empirical findings can be generalized with confidence because selection of the sample has not biased the parameters used to estimate the wage offer.

II. DATA SET, SAMPLE, OPERATIONAL DEFINITION OF VARIABLES, AND EMPIRICAL MODEL

The data set used in the empirical analysis is the Panel Study of Income Dynamics [8, 9, 10]. The study's design is longitudinal and interviews have been taken once each spring since 1968[3]. The use of the data for this study is cross-sectional using the fifth year, 1972. Economic variables are reported for the year 1971. In a married household with spouse present, the husband is the head by definition. The weighted sample used in this study is representative of the two-adult-headed household population of the United States [8, p. 33].

The sample of households where both a head and spouse are present is subdivided by race[4] and used separately for head and spouse to estimate 1) the probability of being in the labor market for a wage, 2) the probability of being disabled, then each probability is used 3) in modified wage equations to estimate the wage offer for all individuals.

A measure of the marginal productivity of time is not observable in all activities. However, the general model presented here is based on models by Olson [11] and Huffman and Lange [7]. As modified, it is fitted to data for all individuals--

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[2] The author is grateful to Wallace Huffman for pointing out this second potential source of bias.

[3] The data tape from which the samples used in this study were drawn is the nine-year tape, 1968-1976.

[4] The sample is divided by race where Orientals, Asians and races other than Black are combined with the Caucasian race to make up the non-Black sample. The methodology of labor supply indicates that asset levels and entrepreneurial skills are more similar between whites and other races than Blacks and others.

wage earners and others, disabled and able-bodied --to provide empirical estimates of the wage offer for each individual. Table 1 provides the operational definition of variables used in the model presented.

TABLE 1: Operational Definition of Variables

AGE	Age--in years--as proxy for stage in the life-style.
AGEAGE	Age squared--measures the marginal effect of age.
EDUC	Educational level--an ordinal scale indicating the amount of academic and nonacademic formal training.
HEALIMIT	Severe health limitation--dummy variable.
EDILIMIT	Education of head times disability indicator--interaction term.
YRSDIS	Years disabled--ordinal variable--measures adjustment times since onset of health impairment.
$V_N - T_N^a$	Estimated after-tax nonwage, earned income of head and spouse.
$V_I - T_I^a$	After-tax asset income from financial investments.
NUMCHILD	Number of children in the household--age less than 18 years.
ρ_D	Linear probability of being disabled.
ρ_M	Linear probability of being in the market for a wage.
TRANSFER	Noncontributory nonwage income--includes transfer income.
NONWAGEY	Contributory nonwage income--includes Social Security, unemployment and workers' compensation, private pensions, etc.
WAGEARN	Indicates wage earners--individuals participating in the labor market for a wage.
SMSA	Distance from the family's residence to the nearest SMSA.
REGION	Region of the country where 1971 income was generated. Dummy variable where: 1=northeast; 2=northcentral; 3=south; 4=west.
OCCUP	Set of dummy variables indicating broad occupational categories for head and spouse where: 0=retired, student, or housespouse; 1=professional; 2=manager or official; 3=businessperson; 4=sales or clerical; 5=craftsperson; 6=operator; 7=unskilled labor or service worker; 8=farmer; 9=misc. for head; missing for spouse.
ln W(1-t)	The after-tax wage offer.
$t = t_o + S_e$	The sum tax rates applicable at the margin--Social Security tax rate (S_o) plus income tax rate (t_o).
CHILD6	Youngest child less than 6 years old.
CHILD12	Youngest child six years to 12 years old.
CHILD18	Youngest child 12 years to 18 years old.
$^a T$	Share of total income tax from stated source.

The empirical model:

$$\begin{aligned} \rho_{1M} = {} & \delta_0 + \delta_1 AGE_1 + \delta_2 AGE_2 + \delta_3 HEALIMIT + \delta_4 EDUC_1 + \delta_5 EDUC_2 \\ & + \delta_6 EDILIMIT + \delta_7 AGEAGE_1 + \delta_8 AGEAGE_2 + \delta_9 CHILD6 \\ & + \delta_{10} CHILD12 + \delta_{11} CHILD18 + \delta_{12} TRANSFER + \delta_{13} NONWAGEY \\ & + \delta_{14} V_N(1-T_N) + \delta_{15} WAGEARN_2 + \delta_{16} V_I(1-T_I) + \delta_{17} YRSDIS \\ & + \delta_{18} REGION_2 + \delta_{19} REGION_3 + \delta_{20} REGION_4 + \mu_1 \end{aligned} \tag{1}$$

$$\begin{aligned} \rho_{1D} = {} & \zeta_0 + \zeta_1 AGE_1 + \zeta_2 AGE_2 + \zeta_3 HEALIMIT + \zeta_4 EDUC_1 \\ & + \zeta_5 OCCUPH_1 + \zeta_6 OCCUPH_2 + \zeta_7 OCCUPH_3 + \zeta_8 OCCUPH_4 \\ & + \zeta_9 OCCUPH_5 + \zeta_{10} OCCUPH_6 + \zeta_{11} OCCUPH_7 + \zeta_{12} OCCUPH_8 \\ & + \zeta_{13} REGION_2 + \zeta_{14} REGION_3 + \zeta_{15} REGION_4 + \zeta_{16} AGEAGE_1 \\ & + \zeta_{17} AGEAGE_2 + \zeta_{18} TRANSFER + \zeta_{19} NONWAGEY + \zeta_{20} V_N(1-T_N) \\ & + \zeta_{21} V_I(1-T_I) + \zeta_{22} CHILD6 + \zeta_{23} CHILD12 + \zeta_{24} CHILD18 \\ & + \zeta_{25} NUMCHILD + \xi_1 \end{aligned} \tag{2}$$

$$\begin{aligned} \ell n\ w_1(1-t_1) = {} & \alpha_0 + \alpha_1 AGE_1 + \alpha_3 EDUC_1 + \alpha_4 AGEAGE_1 + \alpha_5 YRSDIS \\ & + \alpha_6 EDILIMIT + \alpha_7 HEALIMIT + \alpha_8 REGION_2 \\ & + \alpha_9 REGION_3 + \alpha_{10} REGION_4 + \alpha_{11} SMSA \\ & + \alpha_{12} \beta_{1M} + \alpha_{13}(1-\beta_{1D}) + \epsilon_1 \end{aligned} \tag{3}$$

$$\begin{aligned} \ell n\ w_2(1-t_2) = {} & \dot{\alpha}_0 + \dot{\alpha}_1 AGE_2 + \dot{\alpha}_2 EDUC_2 + \dot{\alpha}_3 AGEAGE_2 + \dot{\alpha}_4 REGION_2 \\ & + \dot{\alpha}_5 REGION_3 + \dot{\alpha}_6 REGION_4 + \dot{\alpha}_7 SMSA \\ & + \dot{\alpha}_8 \beta_{2M} + \dot{\alpha}_9(1-\beta_{2D}) + \epsilon_2 \end{aligned} \tag{4}$$

where i=1,2 for head and spouse, respectively.

III. THE PARAMETER ESTIMATES

In this section the model used to estimate the value of time--wage offer--is for all individuals. Equation (1) is used to estimate parameters for the probability of being in the market for a wage. Equation (2) is used to estimate parameters for the probability of being disabled. The appropriate estimated probabilities are used as regressors in equations (3) and (4)--the modified wage equations[5]. The estimated wage offer can then be used as a measure of the value of time to each individual regardless of employment status and health status.

Probability of Allocating Time to the Market for a Wage

For the estimated parameters of the wage equation to be unbiased, the observed differences in wage offers for persons with identical demographic and economic characteristics must not be systematically related to the labor market supply decision--the work/no work decision. Statistically it is unimportant whether one predicts the probability of being in the market for a wage, i.e., being in the labor market is coded a value of one (1) as is the case here, and not being in the labor market for a wage receives a value of zero (0). However, it is essential to statistically correct for selection bias. When the natural log of the after tax wage rate is regressed on the independent variables identified in equations (3)-(4), one of the two independent variables used to correct for selection bias must be the probability of being in the labor market for a wage--the estimated probability of being in the market for a wage is constrained to values equal to or between zero and one: $(0 \leq \hat{\rho}_M \leq 1)$.

Probability of Being Disabled

If the probability of being disabled is not a random occurrence in the population, the disabled would not face the same wage offer as the able-bodied, even if they were able-bodied.

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[5] Due to space limitations only information regarding statistical use of probabilities is provided here. Details of probability estimates are available from the author.

To predict the probability of being disabled the dependent variable was assigned the value one (1). Therefore, able-bodied assumes the alternate value of zero (0). For use in the wage estimation equation, the probability of being disabled is constrained to values equal to or between zero and one: $(0 \leq \hat{\rho}_D \leq 1)$. The probability of being able-bodied $(1-\hat{\rho}_D)$ is included in the modified wage equations (3) and (4).

The primary purpose of estimating probabilities of market work and disability is as correction factors in the modified wage equations rather than as estimators in their own right.

Head's Wage Equation

Estimates of the head's after-tax wage rate equations are reported in Table 2. In terms of expected signs, there is general agreement with other studies and labor theory. For all heads of households, non-Blacks and Blacks, the wage function is increasing in age of the head, i.e., the log of the after-tax wage offer increases with age. The marginal effects of this function are measured by age of the head squared. The negative estimated coefficient of the squared term indicates that the marginal effect of age on the after-tax wage offer declines as age increases--a relationship consistent with theory and other empirical evidence. Both age of the head and age of the head squared are statistically significant at the .001 level for Blacks and non-Blacks.

TABLE 2: Coefficients Estimated by the Modified Wage Equation for Heads of Households by Race[a]

Variables	Non-Black β	Black β
Age of Head of Household	0.08*	0.05*
Education of Head	0.04*	0.04*
Age of Head Squared	-0.0009*	-0.0005*
Years Head Disabled	-0.01	-0.11*
Education-Limitation Interaction	0.05*	0.11*
Health Limitation	-0.25*	-0.12
Northcentral Region	0.05*	-0.31*
South Region	-0.13*	-0.41*
West Region	-0.07*	0.06
Distance to SMSA	-0.005*	-0.007*
Probability of Head Being Wage Earner	1.66*	1.28*
Probability of Head Being Able-bodied	-0.04	0.57*
Constant	-2.02	
R^2	0.19	0.35
$\bar{R}^2$	0.19	0.34
F-ratio	1078.47	222.52
n	55571	5071

[a] Dependent variable is natural log of after-tax wage rate for heads participating in the labor market for a wage.

*Due to the weighting of the sample to assure randomness--a necessary condition to avoid bias--the number of cases is large. Therefore, the .001 level of significance is used regarding critical values referenced to determine statistical significance.

Likewise, educational level of the head is of the correct sign and statistically significant for both Blacks and non-Blacks. The log of the after-tax wage offer of the head is an increasing function of the head's educational level. The mean educational level of Black wage earners is junior high school. The mean for non-Blacks indicates completion of high school.

The variable correcting for disability or impairment is statistically significant for Blacks but not for non-Blacks. For Blacks the greater the probability of being able-bodied, the greater the after-tax wage offer. Interpreting the marginal wage rate as evidence of the marginal productivity of workers, one would expect the able-bodied to exhibit a higher marginal productivity per worker.

For Blacks and non-Black heads of household the greater the probability of being in the labor market the greater the wage rate. The correction factor for labor market participation of head of household is statistically significant for both Blacks and non-Blacks. The interaction of educational level and health limitation indicates for both races that higher educational levels increase the wage offer in the presence of a severe disability. The relationship is statistically significant for Blacks and for non-Blacks. For both races, a severely limiting disability reduces the wage offer. For non-Blacks, the relationship is statistically significant. Years the head has been disabled is negatively associated with the after-tax wage rate and statistically significant for Blacks only.

Distance from the prominent employment center is measured by distance from the nearest SMSA. The wage rate is assumed to decline with distance from the employment center. The relationship is negative and statistically significant for both races.

Spouse's Wage Equation

Table 3 reports the after-tax wage equation for spouses. For Black and non-Black spouses, the relationship between age and the after-tax wage offer is positive. The age squared term indicates the function is increasing at a decreasing rate--an expected relationship. These relationships are statistically significant for Black and non-Black spouses.

The wage rate is positively related to education for women in both races, a finding consistent with human capital theory. Black spouses have an average educational level of at least some high school. For non-Blacks, the educational level is slightly higher indicating completion of high school. The greater the probability of being able-bodied, the lesser the after-tax wage rate, regardless of race. The greater the probability of being in the labor market, the lesser the after-tax wage offer for Black spouses and the greater the after-tax wage offer for non-Black spouses. The only correction factor not statistically significant for spouses is the probability of being able-bodied for non-Black spouses.

TABLE 3: Coefficients Estimated by the Modified Wage Equation for Spouses by Race[a]

Variables	Non-Black β	Black β
Age of Spouse	0.02*	0.04*
Education of Spouse	0.13*	0.21*
Age of Spouse Squared	-0.0002*	-0.0005*
Northcentral Region	-0.14*	0.38*
South Region	-0.23*	0.14
West Region	-0.17*	0.33*
Distance to SMSA	-0.003*	-0.007*
Probability of Spouse Being Wage Earner	0.41*	-0.54*
Probability of Spouse Being Able-bodied	-0.19	-5.23*
Constant	-0.36	3.99
R^2	0.19	0.41
$\bar{R}^2$	0.19	0.40
F-ratio	905.76	273.35
n	35575	3619

[a] Dependent variable is natural log of after-tax wage rate for spouses in the labor market for a wage.

*Due to the weighting of the sample to assure randomness--a necessary condition to avoid bias--the number of cases is large. Therefore, the .001 level of significance is used regarding critical values referenced to determine statistical significance.

Distance from a major employment center, i.e., distance from the SMSA, is negatively associated with the wage rate for Blacks and non-Blacks. The coefficient is statistically significant for Black and non-Blacks. In general the relationships are as expected. The coefficients estimated here are used to construct the wage offers used to measure the value of time for all individuals.

IV. SUMMARY

Using human capital theory the natural logarithm of the heads' and spouses' hourly wage rates are regressed, separately, on demographic and economic characteristics that influence marginal productivity of individuals plus the sample-selection correction terms for sample inclusion: being a wage earner and being able-bodied.

This study provides econometric estimates and model-building techniques useful to researcher interested in estimating the value of time for all individuals. The continued and increasing interest in non-market productivity provides a need for these estimation procedures.

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DEMAND FOR CONVENIENCE FOODS IN THE UNITED STATES

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ABSTRACT

The factors that affect household demand for convenience food were the objects of this research. Food expenditure models were estimated. Model results show that female and non-wage-earning meal preparers use less convenience food than male and wage-earning meal preparers. As more women enter the work force and more men become meal preparers, the market demand for convenience foods should increase. Estimates of income elasticities are positive but less than typical estimates due to the consideration of the value of time. Household size elasticities are positive and less than one.

SITUATION

The food system in the United States has undergone a startling transformation in just a few decades. The services embodied in purchased food products have been expanded from those of basic nourishment to all aspects of what may be called "convenience". Many kinds of service or convenience are built into the various food products which make up the household shopping list. The purchase of prepared foods obviates the need for some of the homemaker's labor, time and culinary skill. Often the energy costs of preparation are reduced. Multiple ingredient products reduce shopping and planning time as well as storage space requirements when compared to the resources demanded by equivalent home-prepared meals. Further, processed product forms may increase shelf life over fresh ingredients and, in some cases, may even improve the quality of the product. Finally, the food processing industry provides products nearly impossible to produce at home, thereby expanding the opportunities of consumers to include goods they would otherwise do without. A natural question which arises in this atmosphere of change is, "What are the economic and nutritional consequences to users of convenience products?" As a first step in determining the effect of convenience foods on the household diet and budget, it would be useful to determine who uses them and why. Certain household characteristics, such as the age-sex composition, race, and region of residence, are likely to affect food expenditure patterns. Also, characteristics of the meal preparer are expected to influence the households' expenditure behavior. Trends in income, household size and female participation in the work force also affect the patterns of food expenditure.

Two objectives of this research were to identify household characteristics that affect convenience food use and to statistically test for differences among household types. To accomplish these objectives a theoretical model of the demand for convenience food was developed. Because convenience foods substitute purchased services for home produced ones (particularly labor), the motivation for demand must be analyzed using a framework which takes account of the tradeoffs involved between convenience foods and nonconvenience foods. Even a cursory review of available theory suggests that the appropriate framework for analyzing the demand for convenience food is the theory of the household production function. Based on the theory, household characteristics that affect the productivity, value and availability of time were identified as important factors. The final objective was to identify and measure effects of demand determinants in a model of food expenditure.

The definitions and classification of foods, taken from Havlicek, Capps and Axelson [4], provides for classes of nonconvenience, basic convenience, complex convenience and manufactured convenience food. This system provides for the mutually exclusive classification of all foods. Nonconvenience foods are raw, unprocessed foods or ingredient foods. Examples include fresh meats and poultry, whole milk and fresh fruits and vegetables. Basic convenience foods are single ingredient foods with limited culinary expertise embodied, usually providing a type of preservation convenience. Examples include frozen vegetables, frozen fruit juice concentrate and canned meats and vegetables. Complex convenience foods are multiple ingredient, highly prepared foods. Examples include baked breads and rolls, frankfurters and mixtures. Manufactured convenience foods include products which have no home prepared counterpart. Examples include carbonated soft drinks, distilled alcoholic beverages and puffed cheese snacks.

The most notable pieces of research on convenience foods that shed some light on the nature of the products and the issues of importance are Harp and Dunham [3] and Traub and Odland [11, 12, 13]. In their efforts to compare the costs of convenience foods and home prepared counterparts they adopted a cost-per-serving approach based on the costs of ingredients. Traub and Odland also included the costs of fuel and labor in their per-serving costs.

Careful consideration of the theoretical model based on the household production function has lead to the development of a statistical model which goes beyond specifications found in previous

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research. For instance, Redman [8] estimated expenditure models for food away from home and prepared foods. She presumed that the woman would be the meal preparer and did not account for different characteristics of men as meal preparers. Prochaska and Schrimper [7] and Fletcher [1] estimated models for food away from home and food at home. Both allowed either males or females to be homemakers. Although they tested for differences between market-oriented and nonmarket-oriented households, they did not account for differences between meal preparers of different sexes or between non-wage-earning homemakers with and without wage-earning spouses. Therefore, major hypotheses of this paper were that meal preparers with different marketorientation and gender would exhibit different behavior, including different expenditure elasticities with respect to the value of time and different autonomous levels of use of convenience and nonconvenience foods.

From the theoretical model developed in Hull [6], the key demand determinants were specified, and hypotheses were formulated about the effects of these determinants on the household demand for convenience foods. One important result was that the expected sign of the elasticity of the value of time is indeterminate, and is dependent on the characteristics of the meal preparer.

The empirical version of the household demand functions has been specified as follows. Demand for market goods, M_i, can be expressed as a function of market prices, P_i, income, I, and value of time of the meal preparer, VOT. Other variables that enter the model are household characteristics that proxy for differences in labor productivity, human capital, physical capital, tastes and preferences, and environmental factors, E. The specification of this demand model is

$$M_i = d_i(P_1, \ldots, P_n, I, VOT, E) \qquad (1)$$

Four equations were estimated, one for each class of convenience and nonconvenience food.

VARIABLE SELECTION

The data used to estimate the models were from the 1977-78 Nationwide Food Consumption Survey (NFCS). The 1977-78 NFCS, containing food-use and expenditure data of households in the United States, used a stratified probability sample of households surveyed over four seasons: Spring 1977 through Winter 1978. The household survey included almost 15,000 households across the 48 contiguous states. Information was elicited on the kind, form, cost and quantity of each food used during the week prior to interview. Information on eating habits and socioeconomic and demographic characteristics such as the household age-sex composition, income and size was recorded as well. Only housekeeping households, defined as those households with at least one person having ten or more meals from the household supply during the survey period, were included in the estimation sample. Out of the 14,032 housekeeping households 5,085 were deleted because data on the variables (mostly individuals' incomes) were either not available or reliable, or because they reported zero level of use of manufactured convenience foods. The final sample size for model estimation was 8,947 households.

Prices were not included explicitly in the statistical model. However, expected differences in prices between regions, seasons and urban settings were accounted for by including dummy variables for these effects. Money value of food used in each convenience class was chosen as the appropriate measure of consumption because this provided a means for aggregating foods into the broad convenience classes. The household meal preparer was the person for whom value of time was measured. In some cases, the male head was identified along with female head as meal preparer. In those cases, the female head was assumed to be the meal preparer.

Once the meal preparer was determined, a measure of value of time was needed. Theoretically, the value of time for an income earner would be the individual's wage (earned income per period divided by number of hours worked in the period). However, because computed hourly wages were unreasonable, the Fletcher method to measure value of time was chosen.

Fletcher [1] suggested that earnings are a proxy for the value of time. Net incomes and wages and salaries were converted to a weekly basis and combined to form the measure of earnings. This procedure provides a value of time proxy for meal preparers with earned income, but for those who do not work outside the home there is no such information reported. Fletcher [1] suggested that their market opportunity earnings be estimated using Heckman's sample selection bias procedure (Heckman [5]).[2]

Gronau [2] suggested that the potential wage of a nonworker was not important in determining the value of time for an individual. Instead, Gronau has shown that a nonmarket-oriented meal preparer's value of time would be pegged to the market wage of a wage-earning spouse. In this paper, for households with nonmarket-oriented meal preparers, but with a market-oriented other head of household, the earnings of the "other head" were used to proxy for value of time. Hence, dummy variables have been used as intercept- and slope-shifters (on the value of time proxy) to account for differences between (1) market-oriented meal preparers (those with earned income) (2) nonmarket-oriented meal preparers (those without earned income) without a wage-earning "other head" and (3) nonmarket-oriented meal preparers (those without earned income) with a wage-earning "other head" present, hereafter referred to as "half-market-oriented". Specific hypotheses about differences in slopes and intercepts have been tested. In addition to household size, income, earnings and characteristics of the meal preparers, other independent variables that entered the models were dummy variables for effects of region, season, race, urbanization, farm/nonfarm occupation and age-sex composition of the household.

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[2] See Hull [6] for procedure and results.

The double-logrithamic functional form was chosen to estimate the study expenditure models for two main reasons. First, simple logarithmic transformation of dependent and independent variables allows the model to be estimated in linear form using ordinary least squares regression. Second, the parameters have desirable properties. Partial regression coefficients are estimates of elasticities. Also, when the estimated parameters for income and household size are between zero and one, and the functional form of the model is double logarithmic, the effects of variables are increasing at a decreasing rate (i.e. evidence of economies of scale and the classic Engel income relationship). The logarithm of the weekly money value of food within a class used by a household was the dependent variable for each model. The logarithms of income, household size and value of time (earnings) were used in the models as independent variables. Other independent variables were simply zero-one dummy variables.

The results of estimating each model using ordinary least squares regression are presented in TABLE 1. The F-statistics for all four models are highly significant, indicating that, overall, the independent variables significantly explain the variation in money value of food in each class used by households. The coefficient of determination is between .31 and .47 for all four models, which is moderate to good explanatory power for cross section data on such a large data base (8,947 households). Factors that could improve the explanatory power of the models include knowledge of the household's preferences, kitchen facilities, discretionary time, food and nonfood prices faced, dynamic consumption behavior and away-from-home food consumption.

VALUE OF TIME

Consideration of the value of time is unique to the theory of demand which has motivated the model of demand for convenience foods. Prochaska and Schrimper [7] reported positive value of time elasticities for expenditure on food away from home, with unemployed homemakers having smaller elasticities than employed homemakers. Fletcher [1] reported positive value of time elasticities for food away from home, negative for food at home. Neither Prochaska and Schrimper nor Fletcher allowed for differences by sex or half-market -orientation of meal preparers. The intercept shifts for meal preparers show that female meal preparers use more nonconvenience foods, and less convenience foods than male meal preparers. They also show that nonmarket-oriented meal preparers use more nonconvenience foods, and less convenience foods than market-oriented meal preparers. While this pattern may have been anticipated on casual observation alone, it is consistent with the theory given that men are expected to be less labor efficient than women at meal preparation, and wage-earners are expected to have less discretionary time than non-wage-earners.

Table 2 shows how value of time elasticities compare across convenience foods for different attributes of the meal preparer. For the nonworking female meal preparer (i.e. the traditional housewife), the naive hypotheses about the value of time elasticities were verified: the higher the value of time, the more spent on convenience foods. Nonmarket-oriented females also use less nonconvenience foods, the higher their value of time. The less traditional types of meal preparers had different responses to changes in the value of time. Market-oriented male meal preparers (i.e. the working men) had value of time elasticities with signs that ran opposite to those for the nonmarket-oriented females. Market-oriented females and nonmarket-oriented males have characteristics which have offsetteng impacts on their value of time elasticities.

Several factors are offered as explainations of these patterns. Working males who are meal preparers tend to rely heavily on convenience foods regardless of their value of time. Their marginal utilities for convenience foods and marginal productivity in meal preparation using convenience foods may decline relative to the marginals for nonconvenience foods as their value of time increases. Also, these male meal preparers tend to represent small households where away-from-home food consumption may be a feasible substitute for at-home food consumption, as the value of time increases. Nonworking females tend to rely heavily on nonconvenience foods. As their value of time increases, they substitute the time-saving convenience foods for the time-using nonconvenience foods as expected. As more women enter the work force and more men become meal preparers, the market demand for convenience foods should increase.

INCOME AND HOUSEHOLD SIZE

The estimated income elasticities ranged from 0.03 in the nonconvenience food expenditure model to 0.08 in the complex convenience food model. The income elasticity for all food classes was hypothesized to fall between zero and one, since none of the food groups was considered an inferior good (with negative income elasticity) or a luxury good (with income elasticity greater than one). Naive hypotheses would use the typical income elasticities of food expenditure which fall between 0.17 and 0.3 as the expected range. However, those estimates of income elasticities came from models that did not account for the value of time. Those parameters have been hypothesized to be biased upward. All four income coefficients in the food expenditure models have been found significantly greater than zero and significantly less than 0.17, the most conservative estimate of the household income elasticity of expenditure for food at home reported by Salathe [9].

The significance of statistical tests on the range of income elasticities verifies that the food categories investigated are neither inferior nor

TABLE 1. Partial regression coefficients and standard errors[a] for models of household food expenditure on nonconvenience and basic, complex and manufactured convenience classes of food.

Independent Variable	Nonconvenience Food	Basic Convenience Food	Complex Convenience Food	Manufactured Convenience Food
Intercept	1.6393	1.3366	1.0793	-0.2111
	(0.1708)	(0.2335)	(0.2328)	(0.3019)
Intercept shifts for meal preparers:				
Non-market-oriented	0.4410	-1.3770	-0.6736	-0.6813
	(0.2416)	(0.3303)	(0.3293)	(0.4270)
Half-market-oriented	-0.1633	-0.4316	-0.0288	-0.4738
	(0.1119)	(0.1530)	(0.1526)	(0.1978)
Female	0.4423	-0.4957	-0.5339	-0.3343
	(0.1752)	(0.2395)	(0.2389)	(0.3097)
Log (value of time)	0.0907	-0.1000	-0.0278	-0.0312
	(0.0323)	(0.0442)	(0.0440)	(0.0571)
Interaction effects of meal preparers on log (value of time):				
Non-market-oriented	-0.0786	0.2833	0.1152	0.1208
	(0.0480)	(0.0657)	(0.0655)	(0.0849)
Half-market-oriented	0.0388	0.0922	0.0041	0.0859
	(0.0213)	(0.0292)	(0.0291)	(0.0377)
Female	-0.0646	0.0852	0.0580	0.0502
	(0.0339)	(0.0464)	(0.0463)	(0.0600)
Log (income)	0.0290	0.0673	0.0593	0.0806
	(0.0073)	(0.0100)	(0.0100)	(0.0130)
Log (household size)	0.7380	0.6667	0.8595	0.8147
	(0.0227)	(0.0310)	(0.0309)	(0.0401)
Region:				
Northeast	0.0466	0.2217	0.1996	0.0975
	(0.0170)	(0.0232)	(0.0231)	(0.3000)
North central	-0.0516	-0.0239	0.1170	0.0558
	(0.0172)	(0.0235)	(0.0234)	(0.0304)
South	-0.0109	-0.0836	-0.1066	0.0057
	(0.0165)	(0.0226)	(0.0226)	(0.0292)
Season:				
Spring	-0.0369	-0.0783	-0.0790	-0.0007
	(0.0152)	(0.0208)	(0.0207)	(0.0269)
Summer	0.0561	-0.1161	-0.0385	0.0286
	(0.0151)	(0.0207)	(0.0207)	(0.0268)
Fall	-0.0051	-0.0405	-0.0694	-0.0282
	(0.0144)	(0.0197)	(0.0197)	(0.0255)

TABLE 1 (continued)

Independent Variable	Nonconvenience Food	Basic Convenience Food	Complex Convenience Food	Manufactured Convenience Food
Race:				
White	-0.2223	0.0181	0.1175	0.1286
	(0.0312)	(0.0426)	(0.0425)	(0.0551)
Black	-0.1180	-0.1157	-0.0668	-0.0098
	(0.0343)	(0.0469)	(0.0467)	(0.0606)
Urbanization:				
Central city	0.0615	0.1118	0.0936	0.0409
	(0.0141)	(0.0193)	(0.0193)	(0.0250)
Suburban	0.0077	0.0556	0.0871	0.0588
	(0.0133)	(0.0182)	(0.0181)	(0.0235)
Occupation:				
Farmer	0.1589	-0.0781	-0.1255	-0.0911
	(0.0407)	(0.0557)	(0.0555)	(0.0720)
Age-sex variables:				
Males:				
21 to 54	0.1262	0.0256	0.1103	0.0438
	(0.0185)	(0.0253)	(0.0252)	(0.0327)
55 to 74	0.1788	-0.0094	0.0061	-0.0734
	(0.0198)	(0.0270	(0.0269)	(0.0349)
75 to 99	0.0412	-0.1670	-0.1539	-0.1655
	(0.0314)	(0.0430)	(0.0428)	(0.0555)
Females:				
21 to 54	0.0436	0.0620	-0.1087	-0.0887
	(0.0241)	(0.0330)	(0.0329)	(0.0426)
55 to 74	0.0697	0.0292	-0.1988	-0.1950
	(0.0235)	(0.0321)	(0.0320)	(0.0415)
75 to 99	-0.0290	-0.0293	-0.2296	-0.2731
	(0.0288)	(0.0394)	(0.0392)	(0.0509)
Children:				
0 to 2	-0.1384	-0.0465	-0.0608	-0.0942
	(0.0220)	(0.0301)	(0.0300)	(0.0389)
3 to 5	-0.1165	-0.0737	-0.0807	-0.0920
	(0.0191)	(0.0260)	(0.0260)	(0.0337)
6 to 11	-0.0756	-0.0349	-0.0270	0.0447
	(0.0169)	(0.0231)	(0.0230)	(0.0298)
12 to 18	0.0418	0.0156	0.0456	0.0513
	(0.0182)	(0.0249)	(0.0249)	(0.0322)
MSE[b]	0.252	0.472	0.469	0.789
F RATIO	262.40	134.83	236.44	130.45
R-SQUARE	0.469	0.312	0.443	0.305

[a] Standard errors are in parentheses.

[b] Mean Square Error

TABLE 2. Value of time elasticities for meal preparers with different attributes from models of household expenditure on nonconvenience and basic, complex and manufactured convenience classes of food.

	Non-convenience		Basic convenience		Complex convenience		Manufactured convenience	
Attribute	Male	Female	Male	Female	Male	Female	Male	Female
Market-oriented	.091	.026	-.100	-.015	-.028	.030	-.031	.019
Nonmarket-oriented	.012	-.053	.183	.269	.087	.145	.090	.140
Half-Market-oriented	.052	.065	-.008	.077	-.024	.034	.055	.105

luxury goods, and that demand models that ignore the effects of the value of time overestimate the elasticity of expenditure with respect to income. As income rises, demand for all food should rise, with convenience food demand rising faster than nonconvenience food demand.

The household size elasticities are also very plausible, indicating stronger economies of size for meal preparation using the less convenient foods. It has been verified for all models that the elasticity of household size falls in the expected range, as indicated by the significance of the tests on the upper and lower range of the coefficients. The coefficients of the logarithm of household size range from 0.67 for basic convenience foods to 0.86 for complex convenience foods. The trend for declining household size pointed out by Stafford and Wills [10] implies that households will spend an increasing amount per person on all food. Since the household size elasticity is smallest for basic convenience food and largest for complex convenience food it is hard to predict the overall effect of this trend on share of food dollar spent on all convenience food.

OTHER EFFECTS

The profile of households that are heavy users of convenience foods is directly related to the parameter estimates in the four models presented in this research. White households spend more on convenience foods and less on nonconvenience foods than do black households. For the nonmetropolitan households the value of food used in all categories was the least. For central city households the value of food used in all categories was the largest with the exception of value of manufactured convenience food which was largest for suburban households. Farm households used less convenience foods and more nonconvenience foods than nonfarm households. Money value of all food categories was largest for households in the northeast.

The patterns observed with regard to small children are predictable: the effects are all negative but most negative for nonconvenience foods. Although the presence of small children reduced the amount spent on all food classes, the effect requires some special interpretation. Since household size is a variable in the model, the parameters of the age-sex characteristics are interpreted as the effects holding household size constant. Therefore, these are not the effects of adding a member of a given category, they are the differences between two households, holding household size (and every other variable) constant, but one household with a member of a given category, the other without one. While the presence of small children in a household indicates less spent than the typical household of a given size, the addition of a small child would increase the amount spent on food with the greatest increase for basic convenience food, and the smallest increase for nonconvenience food.

The presence of teenagers or men aged 21 to 54 in a household indicates more spent on all food than the typical household of a given size. The addition of a teenager would increase the amount spent on nonconvenience and complex convenience food about equally. Presence of females and elderly males cause more to be spent on nonconvenience foods. The significance of the age-sex variables in explaining the dependent variables implies that household size alone is not an adequate measure of food requirements.

SUMMARY AND SUGGESTIONS FOR FURTHER RESEARCH

The intercept shifts for meal preparers show that female meal preparers use more nonconvenience foods, and less convenience foods than male meal preparers. They also show that nonmarket-oriented meal preparers use more nonconvenience foods, and less convenience foods than market-oriented meal preparers. As more women enter the work force and more men become meal preparers, the market demand for convenience foods should increase.

The significance of statistical tests on the range of income elasticities verifies that the food categories investigated are neither inferior nor luxury goods, and that demand models that ignore the effects of the value of time overestimate the elasticity of expenditure with respect to income. As income rises, demand for all food should rise, with convenience food demand rising faster than nonconvenience food demand. The trend for declining household size pointed out by Stafford and Wills [10] implies that households will spend an increasing amount per person on all food. The significance of the age-sex variables in explaining the dependent variables implies that household size alone is not an adequate measure of food requirements.

Several extensions of this research would be beneficial in verifying the models, resolving inconsistencies and making more detailed predictions. Keeping with the broad approach taken in this research, some further research as to nutritional implications of household behavior should be investigated. The nutritional adequacy of the broad food groups may lead to important policy implications. For instance, if one group of foods should be determined to be less nutritious than other food groups, there may be a special need for educational programs targeted for heavy users of that food group.

Some other demand research would be fruitful as well. Since this research has shown that the model works well for broad groups, a reasonable next step would be to apply the same approach to more specific commodities, where including analysis of price effects is more appropriate. The model suggested would be to estimate the quantity demanded for more specific food groups as functions of market prices, income, value of time, characteristics of the meal preparer, and age-sex composition of the household. Factors that could improve the explanatory power of the models include knowledge of the household's preferences, kitchen facilities, discretionary time, food and nonfood prices faced, dynamic consumption behavior and away-from-home food consumption. Improved demand models for more specific food groups will allow food processors and distributors to anticipate trends in retail markets, improve planning and provide better service to retail consumers.

To take the model to the limit of its capabilities, i.e. to to draw implications about household allocation of members' labor time, would require an enormous amount of data. The model specification would take the form of a complete system of demand and production equations. Estimation of such a system is a desirable goal and should be earnestly considered. However, the information requirements will probably remain prohibitive until surveys and data sets are collected with the full model requirements specifically in mind.

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UNIVERSAL STANDARD FOR INTEREST RATE DISCLOSURES

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ABSTRACT

Absent a basic standard, interest rates quotations cannot be compared reliably. The million+ variations for a given rate impose a costly burden on financial institutions and consumers. A standard is presented to reduce cost and increase accuracy in computing, comparing and verifying interest for credit and savings.

The lawful manner of computing and disclosing the rate and amount of charge for consumer credit is established under Truth in Lending (Pub. L. 90-321, as amended). The same terminology applies to all forms of consumer credit whether it be in the form of a cash loan or sales credit. Commercial and agricultural credit is exempt. Also not covered are loans made by consumer-savers when "lending" savings to financial institutions because such loans are not considered consumer credit. Yet, there is a striking sameness in the arithmetic involved; the major differences are merely in the roles played by borrowers, lenders, savers and creditors. The underlying arithmetic is the time value of money which recognizes the use value of capital and interest as the consideration a borrower pays for its use.

Also, most consumers are neither exclusively borrowers or lenders and are often making both credit and savings trade-off decisions based on interest rates that are not comparable. Why, then, it may be asked: Could not a standard "language" or terminology for rates be devised that would eliminate ambiguity and render the rates reliable?

Purpose. It is the purpose of this paper to provide a universal standard, not only for comparing rates of one savings instrument with another, but for comparing credit and savings options, and also for use in verifying interest computations.

Savings emphasis. The savings aspect of consumer finance will be given greater attention in this paper because the major focus over the past twenty years has been on credit disclosure. The basic guidelines for meaningful disclosure of credit terms were established by the Consumer Advisory Council in 1962 [2], and their enactment in Truth in Lending in 1968 has essentially eliminated the prevalence of oral and written credit misinformation. APR and Finance Charge are well established and widely advertised.

Avoidance of Truth in Lending excesses. Whether such a fundamental achievement can be attained for savings disclosures without incurring the regulatory excesses which have accompanied Truth in Lending cannot be addressed adequately in this paper. However, if previous errors are recognized and avoided the transition to rational savings disclosures can be effected without regulatory excesses.

This author's review [7] of the first decade of Truth in Lending cited the proclivity of regulators to accommodate the industry's reluctance to part with customary trade practices, such as, "add-on rates", "Rule of 78s", "precomputation" and "unearned interest". Also, the basic legislation was flawed in that it was not tight and specific with respect to basic concepts, necessitating complex regulations. For example, many pages of Regulation Z are devoted to distinctions between the "U.S. Rule" and "Actuarial Method", between uses of the 360 and 365-day base years, and ways to count days. There is a positive aspect of the proposed standard for savings, namely, that since it is equally applicable to savings and credit, its adoption for savings may facilitate acceptance of the same tight standards for credit, advancing the true purposes of Truth in Lending: "...to promote the informed use of consumer credit...". Furthermore, as an educator, I cannot resist mentioning the potential that standardization holds not only for improving the efficiency of educating classroom students, but also for the entire financial community which can rid itself of archaic trade customs and address the "use value of money" in a manner appropriate to the 1980's.

The Problem.

The basic problems are two: First, the incredible number of ways interest is currently figured. Second, the lack of uniformity in terminology commonly used. Even the most elementary form of consumer savings, the passbook account, is innocently complex. Variation in types of accounts have been discovered by surveys of savings institution in New Orleans, Louisville, Wichita, San Francisco and Baltimore [4,10]. These surveys were made cooperatively with the author and investigative reporters of local news media with the exception of the New Orleans study. These studies not only asked institutions to respond to questions, but to apply their method to a standard account activity pattern. This validity check revealed differences between the "lip" and the "computer". A recent two-year study [13] was made by the New York State Banking Department which had authority to examine accounts and determine whether the actual interest paid on accounts conformed exactly to the method reported on the survey form. This study contributed not only additional sources of variations, but also the numbers of institutions using the various procedures. All of these studies present evidence of proliferation of methods giving rise to confusion, not only among customers but also bank personnel. Too often only the institution's computer programmer knows the system used, and unfortunately he/she is not in a position to communicate such details to management or to the public in terms that are acceptable to the marketing department and understandable by the consumer.

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[1] Professor of Family Economics

An alternative approach to understanding and quantifying the problem is to identify and delineate the basic variables involved in the computation of interest. Once the variables are identified, it is possible to estimate the number of possible combinations and to evaluate them. It is then possible to propose standards which have cost-saving potential and to reduce disclosures to a comprehensible number.

Over one-million combinations. In Table 1 are presented the variations that may be found in the marketing of savings account. The number of different combinations runs conservatively into millions. For example, there may be as many as 7 methods of compounding using any of 7 interpretations of the number of days in a year in conjunction with 5 day-base systems, and one or more of the 18 methods of determining which balances are eligible to earn interest. These may be used in combinations with 18+ different grace day and over 3 dead day systems, employing one of the 11+ rounding policies and one of the 3 policies regarding payment of interest upon closing an account. [7 x 7 x 5 x 18 x 18 x 3 x 11 x 3 = 7.8 million]. This gives a minimum estimate of the number of possibilities a consumer must consider when attempting to verify the amount of interest paid on a savings account. It is minimum because not all of the items listed in Table 1 are included in the count.

Such complexity is recognized only by those who have probed for full explanations. Often the differences are dismissed as de minimus and considered to be a non cost-effective effort. Also, the complexity is masked by over-simplified disclosures. For example, only the annual rate is given. It may be accompanied by a seemingly innocuous statement such as "We pay daily interest" which is not saying "We pay interest daily". That is, they pay interest on all the money on deposit, using the DIDO (day-in to day-out) system, but do not compound daily. Another simple sounding and attractive statement is "We pay interest on all your money held in the account for the full quarter", which is to say no interest is paid on deposits made during the quarter. Such statements may sound generous, but can be costly for the consumer.

Much of the evidence of the existence of such variations are anecdotal, but real. This author, for example, traced a $131.46 difference in the pay-out of two seemingly identical Certificates of Deposit. The financial institutions had used in their computations 360, 365, and 368-day years as well as both simple and compound interest. Detection of such ingenious computations required over two months of persistent inquiry of the financial institutions for full interpretation of computer print-outs. The incredible response from the executive of another financial institution suggests that not only are there millions of different combinations of known variables, but many more misinterpreted and misunderstood variables. When asked to explain how interest was calculated, he wrote the author:

> "The interest was figured using a 365/360 day year and a 360 day base. This method assumes that every month has the same number of days. We use a 365/360 day year for 6 month MMC's, but with a 365 day base. I know these multiple calculation methods are confusing, however, you probably understand them better than I do."

The potential for errors is well documented by Granovsky [3] who was unable to verify 85% of 156 passbook savings accounts.

UNIVERSAL STANDARD

The standard disclosure format is based on several criteria: (1) A rate format which is in current use and into which other rates can be converted for making equivalency judgments of savings/credit options, (2) A rate which can be used directly to validate performance, that is, to recompute interest amounts, (3) A rate which can be expressed meaningfully for those who are not sophisticated in finance, and (4) A basic rate format which is consistent with the Periodic Percentage Rate and Annual Percentage Rate terminology of Truth in Lending.

The rate proposed is one which is widely used by savings institutions. It is variously described, but most briefly as "daily compounding on day-in to day-out balances". This is to say: Interest is paid each day by multiplying the simple daily rate by the day's ending balance (which includes the day's beginning balance plus any deposits and credits, less any withdrawals and charges made that day). The interest paid that day is credited the first of the next day and added to the balance on which interest is paid the next day.

MDRe Cents per $100 per day[2]

The basic rate expression is cents per $100 per day. These values, referred to hereafter as MDRe, were first used in the published Morse Daily Rate Tables [6] and its popularized version, Check Your Interest [8]. The rationale for the cents per $100 format is that persons can relate more readily and realistically to cents and $100 units than they can to percentages and their decimal equivalents. The contention is that consumers are more likely to interpret correctly 3.699¢ per $100 than they would 0.03699% or 0.0003699. Furthermore, it is contended that if $200 were the amount, persons more readily could compute the correct interest, recognizing it to be twice 3.699¢ (or 7.4¢) than by first decimalizing the percentage to .0003699, multiplying by $200 and then interpreting the answer of .074 to be 7.4¢. Furthermore, the expression of cents per $100 is applicable to any currency using the decimal system, so this basic rate expression has international applicability.

The rationale of the day as the basic unit is that

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[2] MDRe means Morse Daily Rate equivalent.

Table 1. Variables currently used in computing interest on savings and proposed by USIRD, the Universal Standard Interest Rate Disclosure

Variable	Variations	No.	USIRD
A. Time period length			
Year	360,362,364,365,366,368 or 365 1/4 days	7	365
Semi-annual	180,181,182,183,184 or 182 1/2 days	6	
Quarter	90, 91, 92, or 90 1/4 days	4	
Month	28,29,30,31 or 30.41667 days	5	
Week	7 days	1	
Day	Calendar day, business day	2	
B. Year Base	360/360 365/365 365/360 366/365 366/366	5	365/365
C. Compound period	Simple, annual, semi-annual, quarterly, monthly, daily, continuously	7	Daily
D. Balance(s) on which interest is figured	Low balance of month or quarter; Ludlow; DIDO; FIFO (with beginning bal. included or excluded); LIFO; Average Daily Balance for month or quarter; all on balances at beginning or end of period.	9+ 2	DIDO
E. Grace Days	Number of actual/business days at beginning/end of mo./quarter/semester	18+	0
F. Dead days	Number of actual/business days at end of period	3+	0
G. Amounts included	Actual amounts or whole $1, $5, $10, $25 units of deposits and/or of opening balance	5+	Actual amount
H. Rounding policy for:			
interest credited	Up/down/truncate	3	Model* Act[9]
interest factor	Various	11+	
I. Minimums for:			
bal. to earn interest	[See New York study for examples]	9+	0
bal. to avoid penalties	"	7+	
amt. of interest to be credited	"	3+	
J. Miscellaneous rules regarding account closure, transfer of funds and other procedures not itemized.		+	

*See Comment to Sec. 5(c) of A Model State Act - Consumer Savings Disclosure Act (Truth in Savings Act).

a day's length of time is unambiguous; it is a 24-hour segment of time with exceptions of 23 or 25-hour daylight savings transitional days. Unless otherwise stated, it begins and ends at midnight. However, it can begin at any other arbitrarily designated point in time such as 10 AM or 2 PM Greenwich or Eastern Standard Time, or other times conforming to local customs. Also, because a 24-hour day is internationally recognized, the total expression of cents per $100 per day (per centum per diem) has international applicability. In light of the recent expansion of international financial trading involving the general public, the international aspect of this question of standardization of terminology takes on added significance.

Cents per $100 per day meets the two requirements: (1) for making accurate and reliable comparisons between savings and credit options, and (2) for computing and verifying interest payments. Rate tables are readily available [6,8]. The New York State Banking Department requires every bank under its jurisdiction to make such tables available for customer use in verifying accounts [12]. Also inexpensive hand calculators costing less than $40 are available in lieu of tables. Preliminary findings of an Interest Rate Perception Test sustains the hypothesis that consumers can make comparisons and computations with greater accuracy and confidence if those rates are expressed as cents per $100 per day rather than in conventional rate terms.

Annualized Rates

Traditions and custom favor continued use of annual rate espressions of which there are two: The nominal rate, and, the yield rate. Unfortunately, these are not well defined and are used somewhat indiscriminately without consistent regularity. These limitations in the use of annual rates are well documented. But to illustrate the problems inherent in the word "annual", one may recall that every four years questions arise about how to treat leap year. Why, it may be asked, should the same quoted rate result in a higher daily rate in one year than another? And because one-half of the year is longer than the other, why should a U.S. Treasury bond accrue more interest in one half year than it does the other half? Or, why should different bond issues at the same annual rate accrue different daily interest by the change of the calendar date on which they were issued? Such relatively small details may be so well understood and assimilated by the professionals that they may present no problem for them. Indeed they may be an integral art of the financial world. But as these rates become used and quoted in the popular market as bases for other rates, and as more persons are considering a wider scope of investment opportunities, the potential for deception increases. In summary, annual rates currently cannot be used with the requisite degree of assurance that accurate interpretations are being made. The proposed standard establishes precise meanings.

It is possible to annualize the daily rate in a manner which is meaningful and reliable. The two terms proposed are: Annual Percentage Rate (as in Truth in Lending), and Annual Percentage Yield.

Annual Percentage Rate (APR). The Annual Percentage is a nominal (in name only) and not a functional rate. As under Truth in Lending, the periodic (not annual) percentage rate is applied at the end of each period to compute the interest for the period. For example, it is the monthly 1 1/2% rate that is applied monthly, and not the nominal 18% APR. Following the general guideline of Truth in Lending, the proposed APRe is the periodic rate times the number of periods in a year. In this case, "annual" is made synonymous with 365, so the nominal annual rate is 365 times the daily rate. It may be helpful to express these concepts in formula format:

$$i = \text{simple daily rate in decimal form} \qquad (1)$$

$$\text{MDRe} = i \times 10{,}000 = \text{cents per \$100 per day} \qquad (2)$$

$$\text{APRe} = 100 \times i \times 365 \qquad (3)$$

The suffix "e" designates the values to be "equivalent" values, regardless of any other disclosure term or computation method used. It distinguishes terms from other usages of APR and APY. Also this standard disclosure may be used along with other disclosures thereby supplementing without replacing existing disclosures.

Annual Percentage Yield (APY). The yield concept is used to reflect the effects of compounding. The Annual Percentage Yield expresses in percentage rate form the hypothetical yield at the end of 365 days. Since the daily interest is paid or payable each day, it compounds daily. This hypothetical figure is:

$$\text{APYe} = [(1 + i)^{365} - 1]\ 100 \qquad (4)$$

Daily vs. Annual Rate Disclosure. Because the daily rate is not customarily quoted, it may be argued that its disclosure would result in confusion and frustration; that use of the annualized form would be more readily assimilated and accepted. On the other hand, the familiarity argument can become treacherous unless the new annualized terms are clearly distinguished from commonly used expressions. Two examples of annualized usage are offered to illustrate the comparative advantages of daily rates:

Customer literature from the Fidelity Group and from E. F. Hutton discuss their investments; both quote yield values that are almost the same. Hutton's Zero Coupon Bond is purchased Feb. 1, 1982 at $380 and matures Dec. 1, 1988 at $1,000. Fidelity illustrates the computation of an annualized yield of a $10,000 money market investment which, with 4 days accrual of earnings, is worth $10,016.10. The money market fund pays $16.10 on $10,000 after 4 days; the zero bond pays $3,100.00 on $1,900.00 after 2495 days. Which pays the higher yield? The sponsors quote yields of 14.69¢ and 14.68¢, practically a toss-up. However, the cents per $100 per day, computed by using formula (5), are significantly different: 4.02¢ and 3.88¢. This is a difference of $61.10 a year on $10,000. The difference in these two apparently similar instruments is revealed when compared on the same standard.

$$\text{MDRe} = 10{,}000 \left[\sqrt[\text{days in period}]{\frac{\text{closing balance of period}}{\text{opening balance of period}}} - 1 \right] \qquad (5)$$

Annualization merely magnifies the difference by 365 (14.68¢ vs. 14.16¢ APRe) or magnifies and compounds the difference shown clearly by the daily figures 15.81¢ vs. 15.20¢ APYe. Annualization does not increase the accuracy of the facts needed to make the comparative judgment. The same conclusions can be arrived at from daily rates. Another observation is that what both of these reputable organizations refer to as "yield" is out of phase with the defined nominal simple (APRe) or hypothetical (APYe) rates of the standard. The similarity of their "yield" quotes underscores the potential for frustration and deception of persons who rely on unstandardized terms for making comparative judgments.

The usefulness of the cents per $100 per day can also be demonstrated by comparing the position of differently compounded and computed investments quoted at 8%. To perform this exercise, one needs to go through the mental exercise of comparing 8% compounded semi-annually, quarterly, monthly and daily using a 365/365 and 365/360 bases shown on the right side of the table below, and then to compare these seven in terms of the cents per $100 per day rate which, compounded daily, would produce the same yield. The table below shows those equivalencies [13]:

cents/$100/day proposed:		is the equivalent of the conventional:		
MDRe	daily compounded	8%	compounded	day base
2.14¢	"	8%	semi-	365
2.17¢	"	8%	quarterly	365
2.18¢	"	8%	monthly	365
2.19¢	"	8%	daily	365
2.20¢	"	8%	quarterly	360
2.21¢	"	8%	monthly	360
2.22¢	"	8%	daily	360

It should be obvious that less thought and time is required to rank order these alternatives by using the MDRe than by the descriptions of the compounding methods. In fact, such complete information may not be available. They may have been quoted "8% annual rate" if at all. Regulation Q does not require its disclosure unless the yield is disclosed, in which case the yield must be for no more than a year's period, and not appear in greater prominence. It may be correctly argued that the effects of compounding and rate base would have been accurately reflected in the annual yields. So had the APYe values been quoted, the consumer could arrive as readily and quickly at the same decision as if given the MDRe. However, previous research of rate quotations in advertisements [5] and savings literature [1] suggests that yield rate would have been disclosed for only the higher paying instruments. Lower yields are seldom, if ever, advertised or quoted.

INFORMATION NEEDS

Standards for disclosure must conform to the consumers' needs for information for making financial decisions. The type of information needed varies somewhat with the consumers' situation, and may be classified as:

> a' priori: The consumer needs information to consider alternative opportunities before making contractual arrangements.
>
> Trade-offs: After the contract is made, the consumer may wish to evaluate alternative options as they arise and to estimate trade-off casts and benefits.
>
> Evaluative: The consumer may wish to review past performance of a contract and to make comparisons with yields and costs of alternatives.
>
> Validation: The consumer may wish to run checks on interest, principal payments and credits to determine whether they are in accordance with contract terms.

Central to these situations are rates. But is rate information enough? These and other questions regarding adequacy of rate information will be addressed in this concluding section: (1) Is rate information sufficient? (2) If all the consumer wants to know is how many dollars are involved, how important is rate information and might it be misleading? (3) Can the same rate system be applied to past as well as to future performance, and how might they be distinguished? (4) Can the same rate structure be made applicable to both credit and savings situations? (5) Although a single simple rate can work for fixed contracts with regular payments, can it be used with contracts involving payments that are irregular in amount and time?

Sufficiency of rate information. More than rate information is required to make financial decisions. Penalties, bonuses, discounts, points, gifts, premiums, finders fees, restrictions on accessibility and liquidity, methods of compounding and distributing interest as well as many other factors may be even more important than rates. The exclusive focus on this paper, however, is on perfecting the quality of rate information.

Rates vs. dollars. Rate information is no substitute for information about the dollar amounts and time involved; likewise, knowledge of absolute amounts is no substitute for rates. Both sets of information are valuable if properly interpreted and used. Obviously one would prefer to earn $3,100 over $16.10. But only in rate terms, as has been discussed, does the lesser amount appear preferable. The two concepts are often confused, especially when the rates are larger than the amounts involved. For example, in the context of another situation, the maximum speed for a car traveling through a school zone is expressed in miles per hour even though the car will not travel the full 20 miles nor spend an hour in the five-city block school zone. Just as the rate of speed reveals nothing about distance traveled nor time consumed, rates of interest tell nothing about the amount of earnings or finance charges, or about the actual time and money involved. Rates are useful for making comparisons as well as for computing amounts.

Past and future perspectives. Some financial contracts can report rates that are applicable to future commitments; others can only report rates for past performance. For example, money market funds and credit unions, unlike banks, cannot state in advance what rate they will pay. Rates pertaining to the future can be distinguished by adding the descriptor ex ante and those pertaining to past performance by adding ex post.. Variable rate contracts present difficult disclosure problems that are not peculiar to the Universal Standard. However, it is proposed that for contracts which accrue or amortize at other than a constant rate, that both ex ante and ex post rates be posted for various critical points in the life of the contract.

Applicability to irregularities. A related matter is how the Universal Standard can be adapted to financing which involves irregularities of payment times and amounts. This problem has attracted considerable attention under Truth in Lending and has been addressed in Appendix J of Regulation Z and the Comptroller of the Currency's Handbook for Consumer Examinations as well as the Interagency Truth in Lending Procedures manual. Utilizing this effort, the Universal Standard's cents per $100 per day can be computed using formula (6) by inputting the APR derived by the Interagency procedures and the number of days in the unit period.

$$\text{MDRe} = 10{,}000 \left[\sqrt[\text{days in period}]{1 + \frac{\text{APR/periods in 365-day year}}{100}} - 1 \right] \qquad (6)$$

Credit and savings rates. The final question is whether the Universal Standard rates can be used in making valid comparisons between savings and credit. The answer becomes absurdly clear if the question were phrased: "If you are being paid at the daily rate of 3.28¢ per $100 on your savings account and wish to borrow money at a cost of 3.39¢ or 3.27¢ per $100, would you be better off to use your own savings?" The answer is that you would withdraw savings for the former, but not for the latter. Annual rates for savings and credit are not directly comparable. If you had money invested at 12% compounded daily, you would be better off borrowing 12% making monthly payments; the two 12%'s are not equal trade-offs. As shown in the table below the cost would be 3.272¢, but the loss on savings 3.288¢. The table summarizes the Universal Standard rates for a 12% APR loan with various repayment periods. The values are computed by using formula (6) for the MDRe, formula (3) for APRe, and formula (4) for the APYe values.

Payment period	Days in period	MDRe ¢/ $100/day	APRe %	APYe %
Day	365/365	3.28767	12.000	12.747
Month	365/12	3.27188	11.942	12.683
Quarter	365/4	3.23985	11.825	12.551
Semi	365/2	3.19333	11.656	12.360
Annual	365/1	3.10538	11.335	12.000

The 12% APRe value may be a good starting point for interpeting the above table. A 12% loan, if compounded daily, would produce 12.747% at the end of a year for the creditor. The 12% APYe value reflects the $12 yield of 12% compounded annually. The creditor would be better off collecting interest throughout the year rather than wait 365 days. What may seem strange is the APRe value of 11.942% for a 1% per month (12% APR) loan. Yet, this lower rate reflects correctly the conclusion reached above; it is better to receive daily and pay monthly.

If the annualized terms are confusing, the daily MDRe terms are not! They are the common denominator of all of the rate expressions. They reflect the simple daily interest rate i which compounded daily will generate the dollar flows. This simple rate expression not only serves for making accurate comparisons, but also for reproducing the computations. The operations can be performed by anyone who can multiply, divide, add and subtract. Tables and calculators simplify the task, but are not necessary. Thus, it is the i term which is the nucleus of the Universal Standard. It is expressed in cents per $100 per day to give it greater acceptability and be more readily understood and useful.

SUMMARY

The consumer needs rate information that is expressed in an understandable and useable manner for comparing savings and credit options and for validating performance of financial contracts. A major problem is that there may be over a million different combinations of types of savings accounts quoting the same rate for the consumer to compare. The simple daily rate was selected as the lowest common denominator to serve as the basic standard. This expression has the potential of international acceptance since per centum is compatible with any decimal system, and per diem is a universal experience. To render the terms more understandable and useful by the common person, the rate is expressed in cents per $100 per day and labeled MDRe. The values were first published in the Morse Daily Rate Tables. The "e" suffix was added to enable disclosing standard rates for financial contracts that do not pay simple interest on daily balances. Descriptors ex ante and ex post may be added to distinguish time perspectives. Accommodations for irregularities in payments are provided. The daily rate can be used to verify account performance. It meets the criteria of comparability, understandability and usability, and meets the needs of consumers for information prior to contracting, for making trade-off comparative judgments, and for evaluating and validating past performance.

The terminology introduced, although new and different, is technically clean and precise. These are attributes that may insure endurance of this universal standard. The first hurdle is to overcome resistance to change.

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MISLEADING CONSUMERS WITH THE GRAPHICAL NUTRIENT DENSITY FOOD LABEL

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ABSTRACT

This paper reports the results of a study demonstrating that the graphical nutrient density food label has the potential to mislead consumers regarding the nutrient content and quality of food products. Consumer food quality estimations were higher as the calorie base used on graphical nutrient density labels increased. Further, consumer perceptions of food product nutrient levels were positively biased by the addition to the graphical nutrient density label of a calorie base identification statement. Implications of these findings for consumers, policy makers, nutritionists, and the food industry are discussed.

Nutrition labels have been required by the Food and Drug Administration (FDA) on many packaged foods since 1973. The goal of this requirement was to give consumers a fair chance to consider the nutrient content of foods and plan a balanced and healthful diet. The current nutrition label format provides number of calories per serving, total grams of protein, fat, and carbohydrates, and the percentage of U.S. Recommended Daily Allowance (U.S. RDA) for each of eight nutrients.

Since the introduction of the current label, researchers have been concerned because many consumers appear to be confused by the nutrition terminology, the numerical format, and the meaning of the U.S. RDA percentages [1, 2, 8, 17]. Such confusion is thought to hinder product choice and conscientious diet planning. Since 1978, the FDA has been working to develop and test various alternative nutrition label formats, hoping to find one which consumers will find more useful and comprehensive than the current format [10].

The graphical nutrient density format [7, 12] is being given strong consideration as a successor to the current label format [3, 4, 16]. The advantage of the graphical nutrient density format is that it theoretically allows consumers to compare how much nutritional value, in terms of percentage of U.S. RDA, they will receive from a food relative to the amount of calories (in terms of some estimate of daily needs) a serving of that food contains (see Figure 1). A vertical line passing through the endpoint of the calorie bar is intended to encourage this comparison and further, to encourage consumers to select foods in which the nutrient bars pass to the right of the vertical line (i.e., foods for which the nutrient to calorie ratio is greater than 1:1). While the concept of nutrient density has been generally well received by nutritionists [5], its use on food labels poses problems for consumers which have thus far been overlooked. (An exception is Hammonds [6], who briefly discusses potential problems associated with graphical nutrient density food labels.) The present paper outlines several problems with graphical nutrient density food labels and presents some results of an exploratory research study designed to measure the potential of these problems for misleading consumers.

DEVELOPMENT OF HYPOTHESES

In the only empirical study of the graphical nutrient density format, Mohr, Wyse, and Hansen [12] tested its effectiveness against the current label format. Their results indicated that the graphical nutrient density format helped a sample of supermarket shoppers make both rapid and correct nutrition decisions. This effect was more pronounced among shoppers with less education and lower incomes. Despite this favorable evidence, close investigation of the graphical nutrient density format reveals two important characteristics which caution against its use on food labels: (1) The relationship between the calorie bar and the nutrient bars ("nutrient density") is wholly dependent upon the particular calorie base (total daily calorie needs) used; (2) Identification of the calorie base used has not been made available to consumers on the label (consumers could compute the calorie base by using number of calories per serving and the calorie bar, but this involves a fairly sophisticated understanding of the label information and a complex arithmetic calculation). Mohr, et al. used a 2000 calorie base in their study [12], presumably because they believed this number approximates the average daily calorie needs of Americans. Unfortunately, substantial variations in calorie requirements as a function

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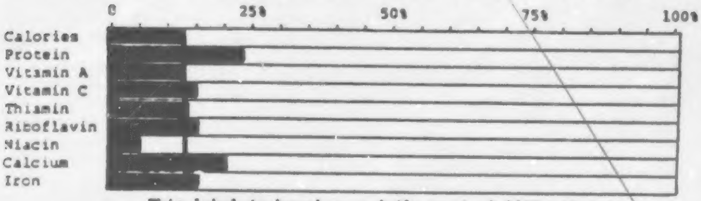
Figure 1. Graphical Nutrient Density Format Food Labels with Calorie Base Identification Statements Added.

1

Serving Size	1 cup
Servings per Container	10
Calories	300
Protein	10 grams
Carbohydrate	26 grams
Fat	9 grams

PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)



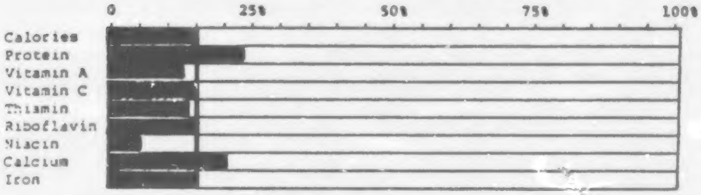
This label is based on a daily need of 2500 calories.

NUTRITION INFORMATION
PER SERVING

2

Serving Size	1 cup
Servings per Container	10
Calories	300
Protein	10 grams
Carbohydrate	26 grams
Fat	9 grams

PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)



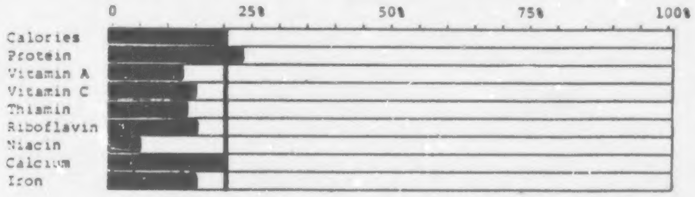
This label is based on a daily need of 2000 calories.

NUTRITION INFORMATION
PER SERVING

3

Serving Size	1 cup
Servings per Container	10
Calories	300
Protein	10 grams
Carbohydrate	26 grams
Fat	9 grams

PERCENTAGE OF U.S. RECOMMENDED DAILY ALLOWANCES (U.S. RDA)



This label is based on a daily need of 1500 calories of sex, age, activity level, health status, and a number of other factors has prevented the FDA from setting a U.S. RDA for calories [13]. Thus the "% of daily nutrient needs" statement on a graphical nutrient density label is appropriate for the nutrients listed, but is incorrect when applied to calories.

Whatever calorie base is used, it seems likely that consumers, most of whom do not have a clear idea of their own calorie needs or that of others [13], would be influenced by that base. For instance, it seems likely that the calorie base used affects consumer estimates of the nutritional quality of the labeled food. More specifically, the higher the calorie base used, the better the likely estimated quality of the food. Figure 1 shows three graphical nutrient density labels for a single food product; only the calorie base differs across the three labels. Note that as the calorie base increases, more nutrient bars equal or exceed the calorie bar (i.e., the food product appears to be more "nutrient dense"). Graphical nutrient density food labels could thus mislead consumers concerned about the actual nutrient content of food products. Should the graphical nutrient density format begin to be used on food labels, manipulation of calorie bases becomes a real possibility, with the food industry pushing for the highest possible calorie bases (e.g., 2500), and nutritionists prefering lower bases (e.g., 2000). (Use of multiple calorie base food labels is precluded by lack of available space.)

Nutritionally identical food products may appear to have relatively more or less nutrient content depending upon the calorie base used on nutrient density food labels, with higher calorie base labeled foods appearing to be more nutrient dense than lower calorie base labeled foods. Thus, Hypothesis 1 predicts a positive relation between calorie base level and consumer food quality estimations: the higher the calorie base level, the higher the quality estimation.

As noted above, the graphical nutrient density format tested by Mohr, et al. [12] did not directly identify the calorie base used. This lack of an identifying statement makes it very difficult for consumers to discern what calorie base is being used on the label they are viewing. Providing a calorie base identification statement on the label (e.g., "This label is based on a daily need of 2000 calories.") is likely to increase consumer confidence in and satisfaction with the nutrient density format. This increased confidence and satisfaction may be reflected in consumer perceptions that food products labeled with a calorie base identification statement are more nutritious than (nutritionally identical) food products labeled with a nutrient density format label without calorie base identification. This type of "halo effect" has been found in prior food label surveys: even when understanding and use of increased amounts of label information is lacking, the simple presence of the additional information on the label leads consumers to believe foods so labeled are superior [9, 11, 14]. Thus, Hypothesis 2 predicts that the presence of a calorie base identification statement on a label will positively bias consumer perceptions of the nutrient levels in the food product.

QUESTIONNAIRE DESIGN AND ADMINISTRATION

Booklets containing a series of stimulus food labels and questions appropriate for testing Hypotheses 1 and 2 were designed and pretested.

Part 1 of each booklet contained a stimulus food label in the graphical nutrient density format using either a 1500, 2000, or 2500 calorie base (see Figure 1). The variable of interest in Hypothesis 2, calorie base identification, was manipulated by including the statement "This label is based on a daily need of 1500 (2000, 2500) calories" on half of the stimulus labels. The other half of the stimulus labels contained no identification statement.

The order in which the nutrient names appeared on the stimulus labels was constant (the order mandated by current FDA regulations was used). Two different randomly derived orders of nutrient bars were used to avoid the possibility of a nutrient name/nutrient bar confound. The particular calorie base and order of nutrient bars presented to respondents were randomly determined. The instructions in the booklet asked respondents to examine the stimulus food label and to answer a number of questions which tapped their perceptions of (1) the degree to which each of the eight stimulus nutrients was present in a satisfactory amount; (2) the degree to which the eight stimulus nutrients as a group were present in a satisfactory amount; and (3) the likelihood that they would purchase that food product based on its nutrient content. Specifically, respondents were asked, for each of eight nutrients, "How satisfactory a source of (nutrient name) is this food product?". In addition, respondents were asked "Overall, how satisfactory a source of the eight nutrients listed in this food product?". These nine questions utilized nine-point response scales ranging from "very unsatisfactory" to "very satisfactory". Finally, respondents in Part 1 were asked "How likely are you to purchase this product because of its nutrient content?" (nine-point scale: "very unlikely" to "very likely").

Part 2 of the booklet contained three stimulus food labels in the graphical nutrient density format: one each using a 1500, 2000, and 2500 calorie base (see Figure 1). Except for the length of the calorie bar and its associated vertical line, the three food labels contained identical nutrient information. In effect, the stimuli in Part 2 consisted of three label variants for one food product, presented to respondents as information on three food products. The order in which the three labels were presented on the page was randomly varied and, as in the Part 1 stimulus label, two different randomly derived orders of nutrient bars were used. Respondents were asked to carefully examine the three labels and then to rank order the three food products they represented from most to least satisfactory.

The 88 respondents in the study were solicited from among grocery shoppers in three supermarkets belonging to a large chain. The three stores were chosen specifically because their patrons covered a wide range of socio-economic, age, and other demographic characteristics. The study was conducted during morning, afternoon, and evening hours, and on both weekdays and weekends. Shoppers were asked by interviewers to volunteer to participate in a "Nutrition Labeling Study" being conducted by researchers from a nearby university. The study was briefly explained and verbal instructions were given by the interviewer to supplement the written instructions in the booklet. Respondents completed the two parts of the study separately; Part 1 always preceded Part 2.

RESULTS

Table 1 presents respondents' food quality estimations from Part 2 across calorie base conditions. As predicted by Hypothesis 1, the mean rank order of estimations declines monotonically from calorie base 2500 to 1500. Analysis via Friedman Two-Way ANOVA by Ranks [15] indicated a significant calorie base effect on rank order estimation ($X_r^2 = 39.09$, df = 2, $p < .001$).

TABLE 1

Consumer Food Quality Estimations Across Calorie Base Conditions

Calorie Base Condition	Mean Rank[a]
2500	1.52
2000	2.00
1500	2.48

Where 1 = most favorable estimation
3 = lease favorable estimation
[a] Mean Ranks significantly different at p <.001 by Friedman Two-Way ANOVA
N = 86

The data used to test Hypothesis 2 were responses to the stimulus food label in Part 1 of the booklet. The three dependent measures were (1) overall satisfaction with nutrient content, (2) summed satisfaction with the content of the eight nutrients (summing the eight responses and dividing by 8), and (3) the likelihood of purchasing the product for its nutrient content. Mean responses on these three variables across calorie base conditions are given in Table 2. For all three measures the means are in the hypothesized direction and all differences are significant by one-tailed *t*-test (overall: *t* = 1.84, df = 86, p<.05; summed: *t* = 1.98, df = 84, p<.05; likelihood: *t* = 2.17, df = 84, p<.05).

TABLE 2

Mean Consumer Perceptions of Food Product Nutrient Levels by Presence or Absence of Calorie Base Identification Statement

Perceived Nutrient Level Measures	Calorie Base Identification Present	Calorie Base Identification Absent	p<
Overall Satisfaction With Nutrient Content[a]	4.84 (44)	4.11 (44)	.05
Summed Satisfaction With Nutrient Content[b]	3.98 (43)	3.30 (43)	.05
Likelihood of Purchase For Nutrient Content[c]	4.14 (42)	3.23 (44)	.05

[a] Where 1 = very unsatisfactory...9 = very satisfactory
[b] Where 1 = very unsatisfactory...9 = very satisfactory; responses to each of eight nutrient level satisfaction questions summed and divided by 8
[c] Where 1 = very unlikely...9 = very likely
Probabilities based on one-tailed *t*-tests

DISCUSSION

Both hypotheses in this study were confirmed by the data. First, calorie base level significantly affected consumer estimations of food product quality. Food quality estimates declined as the calorie base used declined, despite the fact that the stimulus food labels portrayed nutritionally identical food products. Second, the presence or absence of a calorie base identification statement on labels affected consumer perceptions of food nutrient levels. Consumers perceived nutritionally identical foods to have higher nutrient levels when a calorie base identification statement was present on a label than when it was absent.

There are several implications of these findings for consumers, policy makers, nutritionists, and the food industry. Most importantly, the findings of this study indicate that the graphical nutrient density label format can be used to mislead consumers regarding the nutrient content and quality of food products.

It is apparent that manipulation of the calorie base used on graphical nutrient density labels is a potentially major problem. It would probably be in the best interests of the food industry to have the highest possible calorie base used. This would make their food products appear more nutrient dense. It is important to note that the highest calorie base level tested in this study (2500) exceeds the daily calorie needs of a large segment of the American population. On the other hand, if nutritionists succeed in promoting a lower calorie base (e.g., 2000), the food industry might well protest, and there will still be many Americans for whom this calorie base is too high or too low.

It is hoped that this study will alert policy makers to these calorie base level problems in the graphical nutrient density label. There are at least two reasonable responses for policy makers. First, they could avoid the graphical nutrient density label and its associated problems by opting to mandate use of some other label format or formats. Second, they could investigate the graphical nutrient density format more thoroughly in an attempt to mitigate the calorie base problems, perhaps by developing data enabling the advantages of the graphical nutrient density format to be weighed against its disadvantages. If the latter course is chosen, further research on possible additional effects of varying calorie bases would be in order. One direction such research might take would be to study the effects of calorie base on consumers' own estimated daily calorie needs. As has been pointed out, many consumers have little idea of their own daily calorie needs [13]. Reading graphical nutrient density labels stating "% of daily nutrient needs" with calories listed below the statement as one of the "nutrients," may have a measurable impact on consumers' estimations of their own daily calorie needs.

This study also found that merely adding a calorie base identification statement to the graphical nutrient density label had a major impact on consumer perceptions of nutrient levels. The most general implication of this finding (and others similar to it) is that a little added information can have a big, and generally, positive impact on consumer perceptions of the food products they buy. The food industry may wish to take note of this phenomenon and soften some of its opposition to additional information disclosure. Policy makers must be conscious of the type of impact a little information can have as they go about deciding how much information disclosure to require. Again, more research is needed to illuminate this interesting and important informational effect.

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FOOD PRICES AND SELECTED FOOD PROMOTIONS: A DECADE COMPARISON

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Abstract

A comparison of supermarket prices over a decade is used to assess the effect of selected promotional devices. Results indicate that while there may be a lowering of costs by purchasing private brands rather than nationally advertised products, the former is not always the best buy. The percent of savings achieveable through the substitution of private brands has decline over the ten years studied. The discontinuance of trading stamps may temporarily reduce prices but the effect can be short lived. Contrary to the usual charges, coupon distribution has not had a negative effect on supermarket prices. The costs of such campaigns appear to have been absorbed into promotional expenses.

INTRODUCTION

Supermarket shopping continues to be a topic of interest and concern among consumers and consumer educators as this essential activity, though consuming a smaller proportion of disposable personal income, still accounts for a large segment of the weekly household budget. As consumers are always seeking methods to decrease the cost of food, the food industry and the supermarkets seem to have devised an unlimited number of promotional devices to attract the attention and dollars of the shopper. While there are relatively few firms in the food processing industry, brand proliferation and product differentiation have led to intense competition in product categories as wholesalers vie for shelf facings at retail. Intense competition among retail outlets has led supermarkets to engage in non price competition through the use of promotional activities.

During the 1960's games and giveaways were used to attract consumer dollars. When it was discovered or at least publicized that these added to the cost of food, and yielded few economic benefits to the consumer, most supermarkets quickly abandoned the practice in a move toward lower prices. By 1970, trading stamps became the "target price inflator" (21). Supermarkets, in an expression of interest in lowering prices, gave up trading stamps. A food price survey conducted in Manchester Connecticut during 1971 demonstrated that the supermarket that had recently discontinued trading stamps did indeed have lower prices than the remaining stores surveyed. When the survey was replicated one year later, the prices at this store were mid point among the ten stores surveyed in the trading area. Two of the surveyed stores were still giving trading stamps at the time of the 1972 survey; the prices at these were no higher than the prices at non stamp stores. Hence, it was concluded that trading stamps did not in fact contribute to higher prices in this trading area; they simply represented an alternate use of promotional dollars by selected supermarkets.

Since 1972 supermarket prices have soared. According to the Bureau of Labor Statistics, prices of food increased by one hundred thrity percent between February 1972 and March 1982 (7). Other accounts of price increases will vary in the magnitude of the change dependent on where the survey was taken and what was included. U.S. News and World Reports recertly stated that consumer spending for food had increased from $99.8 billion in 1972 to $250.7 billion in 1982 which represents a one hundred fifty percent increase. In spite of the fact that food at home now consumes and average of approximately twelve percent[2] of disposable income, a decrease from eighteen percent over the past ten years, consumers tend to view the increase in prices as being significantly larger than the proportional decrease in the cost of food in the family budget. They continually seek new methods to decrease the weekly grocery bill. During the past decade they have joined food cooperatives, shopped farmers' markets, and planted gardens (12). These alternatives to the supermarkets have not provided families with the assortment of goods available at the store.

For well over fifty years the store brands or private label brands of food and non food products have been available (5). Traditionally, these have been priced lower than nationally advertised brands. The wise shopper has been urged to purchase these lower priced alternatives. This method of achieving cost savings has long been recommended in consumer education textbooks (1,22).

In recent years the food industry has expanded product offerings in quality/price ranges to include generic products. These food items and paper goods (priced 20-25% below nationally advertised brands) are packaged in "plain wrappers" to further emphasize the "low price, no frills" image of the goods. It is estimated that generics have captured 2.4% to 8.4% of the supermarket dollar, but they have not been assimilated into the ordinary shopping patterns of the average consumer (16,20). In some stores rather than being integrated with like products, the generics have been segregated away from the main flow of traffic.

"Couponing and Refunding" has become a national passion over the past few years. The number of manufacturer coupons distributed mushroomed from ten billion in 1965 to ninety billion in 1980. While only one in twenty coupons have been redeemed and the number now appears to be waning, reports that four out of five families have used coupons seem to indicate that this type of promotional activity has been favorably accepted by the consumer (10). Coupons, while providing savings at the checkout, have been criticized by consumer specialists and several retail chains as being "price inflators" because the costs associated with these are passed on to all in the form of higher prices. They have been referred to as being discriminatory in nature in that low income consumers who do not subscribe to magazines and newspapers are disadvantaged in their ability to achieve savings. Coupons have been blamed as creating an illusory savings as they may only reduce the cost of nationally advertised brands to equal the cost of the private store brand. Additionally they have been attacked for imposing a time cost on the consumer who must search through newspapers and magazines, clip the coupons and organize them in a convenient way so that they will be retrievable at the market (8,22). Coupons have most recently been castigated for not having kept pace with the cost of living. In 1980 the average face value of coupons was 23.5¢ (10).

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[2] Depending on income, food expenditures can range from 5% to 40% of the household budget.

The purpose of this study is to report a longitudinal study of food prices that casts doubt on a few of the truisms that have been accepted for many years concerning the savings by substituting private label goods and possible expenses incurred with the use of selected promotional devices. Data for this paper have been collected from 1972 to 1982. Surveys were conducted in 1971 and 1972 to determine the level of savings possible by substituting private label goods for name brands and to determine whether or not stores that gave trading stamps charged higher prices. In addition, an assessment of the price dispersion among supermarkets in a limited trading area was made. Surveys were conducted from 1972 to 1982 for the generalized purpose of assessing price level changes among commodity groups, measuring price dispersion inter and intra chain, and to observe other changes in marketing practices in the grocery industry.

The cost to the grocer of the various promotional devices has not been considered here. In this situation trading stamps are generally more expensive than coupons as the grocer pays for the former (21) while the manufacturer absorbs most of the cost of the latter.

METHODOLOGY

To develop the survey list in 1971, ten homemakers in two parent/two or three child households recorded all supermarket purchases for a three week period. This resulted in a shopping list of four hundred and fifty items including grocery, dairy, frozen foods, non-foods, meat, produce and other products. The list specified the brand name and size of each item to be priced as well as comparable store brand items if they were available. Ten frequently shopped supermarkets within a five mile radius of downtown Manchester, Connecticut were surveyed during the last week in January and the first week in February 1971. Of the total list, forty-four items in addition to most meat products were available at all ten stores. Food price comparisons were made on the basis of this list. The survey was replicated during the same time period in 1972.

In 1979 the original list was expanded to fifty-seven items and it was modified to balance it by including more grocery items, and to account for changing tastes and preferences. Surveys of supermarkets in several areas of Connecticut have been conducted over the ensuing years. The majority of the surveys have been conducted in the northeastern section of the state.

For the purpose of the development of this paper, survey data from 1972, 1980 and 1982 were used. The items common to the 1972-1982 lists were used to compare changes over the ten year period. Data from the five supermarkets surveyed in 1972[3] were compared to data from six supermarkets surveyed in 1982.

To compare the change in the price of nationally advertised brands relative to the price of private label goods, items from the 1972 for which stores carried private label substitutes were selected. These same items were selected from 1980 and 1982 survey lists.

FINDINGS

1971 - 1972

The survey conducted in 1971-1972 indicated that there was little price dispersion within the geographic market demonstrated through the use of this survey list. An item by item analysis illustrated that no supermarket carried the lowest price nor the highest price for all items. Table I illustrates that stores which gave trading stamps did not charge higher prices overall.

TABLE I. Price Comparisons 1971-1972.

	1971	1972	$ Change
Super Finast	$26.50	$27.25	+0.75
Top Notch	26.75	26.26	-0.49
Stop & Shop	26.81	27.52	+0.71
Hartmann*	27.03	28.35	+1.32
Shop Rite	27.18	27.11	-0.07
Crispino's*	27.39	27.31	-0.08
Grand Union*	27.62	28.34	+0.72
Popular**	27.92	28.95	+1.03
Pathmark	-----	26.09	----
A & P*	28.83	29.71	+0.88
MEAN	27.34	27.69	+0.35

* Indicates store gives trading stamps
** Store discontinued trading stamps between the 1971 and 1972 surveys

In the month preceding the 1971 survey, Super Finast stopped giving trading stamps. The elimination of this promotional practice was accompanied by an advertising campaign which focused on the price reductions possible through the discontinuance of trading stamps. As the table illustrates, the store did have the lowest prices for this list in 1971, but by 1972 the prices were in line with those of the remaining stores surveyed. Thus, it appears that the stores which give trading stamps do not necessarily charge higher prices; the cost of trading stamps is apparently absorbed into the pro-motional expenses of the retail outlet. A comparison of the market basket using national brands to a like market basket substituting private store brand in 1972 indicated that the consumer could save up to $5.00 on this $27.00 market basket as shown in Table II. The dollar amount of savings was directly related to the number of private store brand items carried by the supermarket. With the exception of A & P, a larger number of items resulted in greater savings.

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[3] Five of the stores surveyed in 1972 were out of business in 1980.

TABLE II. Brand Name vs. Private Label (1972)

	Name Brand	Private	$ Saving	% Saving
Super Finast	$27.25	$23.45	$3.80	16.2%
Top Notch	26.26	None	None	None
Stop & Shop	27.52	24.77	2.75	11.1
Hartmann	28.35	26.07	2.28	8.0
Shop Rite	27.11	22.74	4.37	19.2
Crispino	27.31	26.65	0.66	2.5
Grand Union	28.34	23.97	4.37	18.2
Popular	28.95	27.30	1.65	6.0
Pathmark	26.09	23.10	2.99	12.9
A & P	29.71	27.57	2.20	8.0

Findings 1972 - 1982

A comparison of supermarket prices for stores in northeastern Connecticut between February 1972 and 1982 using name brands, as given in Table III, demonstrates a price increase for the decade to be 127.8% which closely parallels the Consumer Price Index increase of 130% for the time period (6).

TABLE III. Price Comparisons: 1972 - 1982

Supermarket	1972	Supermarket	1982
*Shop Rite	$22.02	*Finast	$47.83
*Stop & Shop	23.48	*Stop & Shop	49.52
**Finast	23.48	**Better Value	52.89
**Hartmann	24.46	**A & P^3	53.89
A & P^1	25.47	***Waubaum's	57.90
		***A & P^2	58.48
MEAN	23.78	MEAN	54.18

Table IV provides comparisons of branded and private label items at selected supermarkets during the three specified years. The three supermarkets in the 1972 survey were in the same general trading area as were the three supermarkets listed for 1982. Given this similarity in competitive conditions, there appeared to have been greater price dispersion among national brands in 1972 and greater price dispersion among private label items in 1982.

TABLE IV. Name Brands vs. Private Brands
A Decade Comparison - Selected Supermarkets

	Name Brands	Private Labels	Percent Savings
1972			
A & P	$8.20	$5.95	37.4%
Stop & Shop	$7.37	$5.66	30.2%
Shop Rite	$7.58	$5.88	28.9%
MEAN	$7.70	$5.81	32.4%
1980			
Stop & Shop	$16.72	$13.49	23.9%
Shop Rite (Manchester)	$15.52	$13.26	17.0%
Shop Rite (Willimantic)	$16.44	$13.62	20.7%
MEAN	$16.22	$13.46	20.5%
1982			
Finast	$16.66	$12.72	31.0%
Shop Rite	$16.40	$14.13	16.1%
Stop & Shop	$16.46	$13.58	21.2%
MEAN	$16.51	$13.58	22.5%

This comparison of name brand vs. private store brand items illustrates the percent of savings achievable through the substitution of private brands has declined over the past ten years. The mean price figures presented in Table V show that the savings in 1972 ($7.68 - $5.82) to have been 34%, in 1980 ($15.92 - $13.40) to have been 21%, and in 1982 ($16.50 - $13.50) to be 22%. While the nominal cost of all items on the list increased, the table points to the fact that the nominal savings achievable through the purchase of private label items decreased (1972 - 1982) on six of the fourteen items.

The average face value for coupons in 1980 was reported to be 23.5 cents. (10) According to the data presented, only four of the items from the 1980 price survey had a price difference larger than 23.5 cents between the name brand and private label substitute. Hence, for ten of the items in the survey a coupon with an "average face value" would reduce the cost of the item to below the cost for the private label substitute. Observations of the 1982 data illustrate that for two of these selected items, the price of the national brand was less than the price of the private label substitute.

These results are in agreement with a review of several recent issues of Consumer Reports (11, 13, 14, 17, 18) which indicated that for some products the private label items were cheaper, but in others the national brands were less expensive. In one study (11) the national brand was by far the "best buy".

TABLE V. Name Brands vs. Private Brands: A Decade Comparison - Selected Items

	1 9 7 2			1 9 8 0			1 9 8 2		
Item	NB	PL	N-P	NB	PL	N-P	NB	PL	N-P
Reynolds Wrap	0.73	0.62	0.11	1.28	1.25	0.03	1.24	1.30	- .06
Scott Towels	0.37	0.28	0.09	0.85	0.70	0.15	0.67	0.67	0.00
Cascade	0.77	0.41	0.36	2.09	1.29	0.88	2.57	1.49	1.08
Chlorox	0.50	0.36	0.14	0.94	0.69	0.25	0.84	0.62	0.22
Fleischman's Margarine	0.51	0.33	0.18	1.13	0.86	0.27	0.95	0.59	0.36
Minute Maid Orange Juice	0.55	0.42	0.13	0.96	0.93	0.03	1.06	1.01	0.05
Wesson Oil	0.66	0.55	0.11	1.33	1.19	0.14	1.16	1.02	0.14
Muellers' Elbow Mac.	0.70	0.49	0.21	0.74	0.63	0.11	0.69	0.52	0.17
Chock Full of Nuts Coffee	0.95	0.71	0.24	2.62	2.20	0.42	2.20	2.12	0.08
Duncan Hines Cake Mix	0.39	0.29	0.10	0.82	0.70	0.12	1.00	0.72	0.18
Skippy Peanut Butter	0.45	0.42	0.03	1.25	1.06	0.19	1.86	1.49	0.37
Heinz Ketchup	0.39	0.34	0.05	0.95	0.77	0.18	1.10	0.84	0.26
Campbell's Chix Soup	0.17	0.15	0.02	0.30	0.28	0.02	0.26	0.29	- .03
Bumble Bee Lt. Chunk Tuna	0.54	0.45	0.09	0.97	0.85	0.12	0.90	0.82	0.08
TOTAL	$7.68	$5.82		$15.92	$13.40		$16.50	$13.50	

NB - Name Brand
PL - Private Label
N-P - Name Brand less Private Label

A comparison of three supermarkets of the same chain located in non competing markets indicated that considerable price dispersion may exist intra chain. The total price of the fifty seven item market basket ranged from $76.85 to $79.30 when nationally advertised brands were priced. There was less price dispersion among the stores when private label items were substituted. The market basket totals ranged from $66.85 to $68.10. The percent savings possible through the substitution ranged from 14.3% to 16.4%. The store with the lowest market basket price for both name brands and private label substitutes was giving double coupon redemption during the survey week as well as most of the year. This store is located within one quarter mile of a warehouse food store. The remaining two stores were not located near a warehouse store.

SUMMARY AND CONCLUSIONS

The findings of the 1972 - 1982 food price surveys in Connecticut indicate that consumer educators may want to include a caveat along with the purchase guideline - that one can save money by buying private brands. While the evidence presented here indicates a savings, the consumer should be advised to check prices. The private label item is not always the best buy. Although it is merely conjecture, it is possible that supermarkets, being aware of the consumers' conditioning to the belief that the private label item is a better buy, have raised the price of these on the assumption that consumers will purchase these without checking the alternative name brand products.

To charges that coupons have increased food prices, the findings of this study indicate the contrary. If coupons increased the prices of national brands on the supermarket shelves, the price spread between name brands and private store brands should have increased in recent years. The data in this study indicate that the price spread between the two types of goods has decreased by 11% from 1972. Further evidence that couponing may not be responsible for higher prices has been demonstrated through the market basket comparison of individual supermarkets in a chain as the store giving double coupons had a lower market basket total than the two stores in the chain that were not giving double coupon redemption. The evidence provided within this paper may lead one to the conclusion that coupon distribution and redemption has not had an inflationary impact on supermarket prices. The costs associated with coupon handling appear to have been absorbed into the promotional expenses of food marketing.

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A REVIEW OF FEDERAL FOOD ASSISTANCE POLICY AND PROGRAMS

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ABSTRACT

The food assistance programs in the 1970's were characterized by rapid growth in participation and costs. Federal policy encouraged participation in the programs and the liberalization of program benefits. The 1980's have brought a markedly different approach to food assistance in response to efforts to reduce the Federal budget. This paper provides a review of major legislative changes in the Federal food assistance programs, describes current economic research in the U.S. Department of Agriculture and discusses possible future policy directions and topics for research.

INTRODUCTION

I have been invited here today to discuss the U.S. Department of Agriculture's (USDA) research in the area of food and nutrition policy. This talk is heavily weighted toward the food programs because my own research has been in that area.

Meetings such as this provide an excellent forum for reviewing the effects of past and current policies, as well as for considering new ideas and directions for Federal program operation and design. I would like to concentrate initially on some of the major legislative changes in the Federal food assistance programs and their effect on program participation and costs. With a clear understanding of the focus and intent of Federal policies as reflected in these changes, we can outline current issues for research and discuss studies presently being conducted at USDA. I will also discuss possible future policy directions and topics for research.

THE DETERMINANTS OF PROGRAM OPERATION: A LOOK AT THE 1970's

We can regard the 1970's as the beginning of a true, integrated system of Federal food assistance. Until then, food programs were operated largely as mechanisms for surplus removal, designed primarily to help support farm income. Events of the late 1960's, including publication of Hunger U.S.A. and other books describing the extent of domestic poverty and hunger, began to change that policy perception. Food programs in general began to be regarded as programs of income assistance to improve the diets of poor families and children.

As a result, emphasis shifted from supplementing diets with donated commodities to providing balanced meals in many of the child nutrition programs. The Food Stamp Program (FSP) became the national approach to general food assistance in 1974, replacing the direct distribution of foods to individuals with purchase vouchers or stamps. National standards for many of the programs replaced State and local regulations, guaranteeing uniform eligibility requirements and benefits.

These and other changes designed to make the programs more responsive to the needs of the low-income population, resulted in dramatic growth in the 1970's in the number of recipients and cost of Federal food assistance. Funding for the programs rose from $1.5 billion in FY 1970 to $10.5 billion in FY 1980.

The FSP exhibited the largest growth in program size, increasing from 4.3 million recipients at a cost of $550 million in FY 1970 to an average of 17.7 million recipients at a cost of $6.5 billion in FY 1980. Federal cash expenditures for the five child feeding programs rose from more than $420 million in 1970 to nearly $2.7 billion in FY 1980. The dominant theme of food assistance in the 1970's was clearly the encouragement of participation in the programs and the liberalization of program benefits.

The important point is that changes in food and nutrition policies, as well as in economic and agricultural conditions in essence, determine program operation. The prevailing political philosophy or attitude, of course, guides determination of Federal policy.

PROGRAM REDUCTION: THE THEME FOR THE EIGHTIES

We are witnessing a markedly different approach to the food assistance programs in the 1980's. The Administration's efforts to reduce Federal expenditures are reflected in an increasing number of legislative changes in program eligibility and benefits. The stated intent is to focus food assistance on those deemed most in need, while reducing Federal outlays. The general result has been, for many of the programs, the first significant decreases in participation and funding levels in over a decade.

The major legislative changes in the food assistance programs since 1980 are summarized briefly below. In addition, the effect of these provisions on participation and program costs are detailed.

The Omnibus Reconciliation Acts of 1981 and 1982 and title XIII of the Agriculture and Food Act of 1981 have significantly changed the scope and operation of the Food Stamp and child nutrition programs. The legislation mandates stricter income eligibility criteria, reduces the frequency of cost-of-living adjustments, lowers the subsidies for the child feeding programs, and increases efforts to reduce fraud and abuse.

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Provisions affecting the National School Lunch Program (NSLP) have contributed to a decline in average participation from 27.1 million in FY 1980 to 23.1 million in FY 1982. Reduced Federal subsidies have led schools to charge higher prices for lunches, usually up 15 to 25 cents. In addition, the maximum charge for a reduced-price lunch has doubled, increasing from 20 to 40 cents. Higher meal costs, then, have served to reduce program participation.

Other changes contributing to decreased participation in the NSLP include stricter eligibility criteria for free and reduced-price meals and a provision, effective October 1, 1981, which limits participation in the child nutrition programs by private schools to those with an average annual tuition of $1,500 or less per child. USDA estimates that 1,000 public schools and 500 private schools have dropped out of the school lunch program since these program changes became effective.

Stricter eligibility guidelines have also been instituted for the FSP. Other cost-cutting measures instituted for the program include: A temporary reduction in the rate at which benefits are adjusted to reflect changes in food costs; a reduction in administrative expense payments by USDA to States which fail to meet targets for error reductions (underissuances, invalid eligibility decisions, and payment errors); elimination of benefits under $10 during the first month of an applicant's eligibility; a delay in the cost-of-living adjustments in the standard, medical, and child-care deductions from gross monthly income; prorating new food stamp participants' first month of benefits daily based on the date of application for food stamps. This provision means that a household with no net income who applied for food stamps when there was one week remaining in the month received stamps equal only to the weekly value of the allotment for the household's size. Previously, the household received the full month's allotment of food stamps.

The result of these and other provisions is clearly seen in the annual program expenditure data. The Federal cost of the FSP fell from $10.6 billion in FY 1981 to $10.2 billion in FY 1982. Cost savings that would be expected, and desired, from the program changes have been partly offset by cost-of-living adjustments in benefits and increases in participation due to a deteriorating unemployment situation.

TOPICS OF CURRENT USDA RESEARCH

The preceding discussion has covered less than 15 years of food assistance history and yet we are afforded two opposing views of program design and operation. The topics of USDA's food assistance research have changed to reflect the prevailing philosophy.

In early 1981, for example, the Economic Research Service (ERS) of USDA began looking at the issue of block grants and the possible effects of converting to such a system on the food assistance programs. The result was a report, published in November 1981, entitled An Alternative Approach To Food Assistance: Categorical Grants.

Because the report considers the effect of converting only the FSP, it is necessary to draw the distinction between block and categorical grants. A block grant involves the consolidation of several programs or activities, funded as a single broad program. A categorical grant, in contrast, is basically a federally funded, State-administered program dealing with a single activity or category of recipients, and operating under a set of established rules.

Transferring program administration to States through a Federal grant system, in general, has been proposed to reduce program costs. Block grants address concerns of program fragmentation and overlap. Savings may result from the consolidation of programs with compatible purposes and goals, largely due to the elimination of a fragmented system of program administration.

Advocates of Federal grants for State program administration further claim the superior ability of States to identify and satisfy the requirements of the targeted population. This claim implies greater program efficiency at the State level and programs which meet the particular needs of its low-income residents. Greater efficiency in the delivery of benefits to recipients implicitly assures that more funds are available for those designated as most in need.

In addition to fiscal considerations, the use of grants, rather than direct Federal control, may also reflect the desire to return certain functions to the States which are currently conducted at the Federal level. The broader philosophical issue of separation of State and Federal powers is apparent in the Administration's proposals to decentralize the Federal Government by curbing spending and reducing the regulatory burden. The acceptance of this philosophy, however, depends largely on the performance of similar grant programs, as well as the willingness of both Congress and the administering agency to relinquish control of program management.

Opposition to grants centers around the ability of all States to effectively design and implement programs which address the needs of their low-income population. Further, program administrators express concern regarding selection of a formula to distribute funds equitably among States.

The ERS report concentrates on the problem of developing a formula for funding distribution. Five funding formulas were developed and the projected appropriations received by an area were compared to the actual funding level in 1979 to determine the impact of each proposed distribution formula.

The report does not recommend a particular formula, but rather, concludes that the final selection of a formula should depend upon the stated objectives of the conversion to a grant program, as well as the application costs of each formula.

The FSP in Puerto Rico was converted to a nutrition assistance grant program on July 1, 1982, by a provision of the Omnibus Reconciliation Act of 1981. Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territories of the Pacific Islands, and the Commonwealth of the Northern Marianas have been selected as testing sites for alternative program designs because the unique characteristics of these areas often conflict with programs designed for the continental United States. Local authorities there may be best qualified to formulate, establish, and administer effective food and nutrition programs. A block grant provides the greatest possible latitude for local administrations to target program funds.

Puerto Rico provided cash benefits rather than food stamps under this program. Funding for the grant is set at $825 million annually--about 25 percent below the previous years' funding of $1.1 billion. In response to lower funding levels, per-person benefit payments were lowered by reducing the Puerto Rico Thrifty Food Plan (TFP) by 7 percent. Maximum benefits, then are set at 93, rather than 100 percent, of the Puerto Rico TFP.

While the Omnibus Reconciliation Act of 1982 prohibits Puerto Rico from providing cash payments under the food assistance block grant, this pilot program does provide an opportunity to examine the possible effects of a cash-out of the FSP. USDA has planned a review of the Puerto Rico program, focusing on the impact of the conversion to a nutrition assistance grant.

Puerto Rico is also the subject of an ERS report which examines food expenditure relationships for participating and eligible nonparticipating households in the pre-grant FSP. The effects of the FSP on food expenditures are measured as the difference between the estimated purchases of a sample of participating households and simulated estimates for households before they participated in the program. In addition, the report presents a comparison of the estimated increases in food consumption using 1977 data and simulated corresponding results for a cash transfer program.

The debate over cash versus direct benefits is not confined to the FSP. The continued provision of direct food donations to the school feeding programs has been the subject of debate among school food service administrators, suppliers and distributors, farm-interest organizations, and USDA since the early 1970's. Groups favoring the payment of cash in lieu of donated commodities have argued that a lack of control over both the foods provided and the timing of deliveries adversely affects meal planning and preparation. Local purchasing authority, it is proposed, could enable schools to more closely tie food purchases to students' personal and ethnic preferences. This, in turn, may lead to a decrease in food waste.

A pilot study was conducted by USDA during the late 1970's in which ten school districts received cash in lieu of commodities. A larger, more detailed study is currently being conducted in order to more adequately assess the implications of a cash-out. The study includes more school districts, 90 versus 10 in the previous study, and a longer study period, 2 years versus 1.

The new study, mandated in the 1981 Agricultural Appropriations, will involve estimating and comparing the costs and effectiveness of the three program options; commodity letters of credit (vouchers), cash in lieu, or the existing commodity donation program. The study will also examine the changes in food use associated with the two alternatives versus the existing program. Other major objectives of the study include assessment of the impacts of the letter-of-credit and cash systems on agricultural commodity markets, farm incomes, the existing food distribution system, government price support and surplus removal efforts, as well as determining the administrative feasibility of the alternative systems. Finally, such issues as the impact of the options on School Food Authorities (SFA) operations, changes in the nutritional content of school lunches, changes in the quality of foods utilized by SFA's, the effect on student costs and participation in school lunch programs, changes in school lunch plate waste, and the impact on other USDA programs will also be addressed. The tentative completion date is mid-1985.

The preceding discussion by no means provides an exhaustive list of current food and nutrition research in USDA. Rather, I have attempted to highlight what I believe to be the most important, and perhaps controversial, issues. Indeed, these appear to be the issues most politically motivated.

Other USDA research continues to assess effects of the programs on various subsectors. For example, a 1982 ERS study examines the effect of the school feeding programs on the agricultural economy. The report, entitled School Food Service Programs and Commodity Market Support, provides estimates of commodity use in the absence of the feeding programs and concludes that the total amount of commodities purchased is greater with the programs. The increase in use varied by commodity. For example, from 335 to 793 million more pounds of cattle and hogs combined were purchased as a result of the school feeding programs. The range for domestic vegetables was 603 million to 1.3 billion pounds.

A LOOK AHEAD

Continued reductions in program participation and benefits clearly suggest the critical questions: Are the programs indeed reaching those most in need and will hunger and malnutrition again become a major problem in the United States?

Three years ago, a study was done in ERS entitled Progress Toward Eliminating Hunger in America in which county-level data were examined to determine effects of all the food assistance programs on retail food sales. The study found that, for the period 1967-76, there was indeed a positive effect on food sales. While no follow-up study is currently being planned in ERS, the dramatic changes in the programs in the last 2 years suggests this as a possible area of research.

Within the broad topic of program effectiveness, we must consider the needs of particular segments of the low-income population and the ability of the current programs to meet these needs. The elderly, for example, have unique problems which require special consideration in program design. Transportation problems or other mobility restrictions, for instance, make not only food shopping difficult, but also applying for and obtaining program benefits. Special exemptions already exist in the program, but are these sufficient?

President Reagan continues to favor assigning the responsibility for the food assistance programs to the States via block grants. This suggests the need for more research on the possible impacts of conversion, as well as on alternative formulas for apportioning funding.

Program cash-outs will undoubtedly continue to be an important issue both for commodity donations to the school feeding programs and the FSP. USDA is planning to test food stamp cash-outs in several areas.

Workfare for the FSP has been a longstanding issue which will undoubtedly continue to be important. Pilot projects requiring work in exchange for food stamps were mandated under the Food Stamp Act of 1977 and extended under the Food Stamp Act Amendments of 1980. Results of these projects and any subsequent analyses will determine the feasibility of adopting a permanent workfare provision.

Continued accumulation of large stocks of surplus foods has raised the question of how to dispose of these surplus foods via consumption without establishing a permanent large-scale program. Administration officials are considering ways to use the existing programs as outlets for surplus foods.

The issue of multiple program participation and hence, receiving multiple benefits, will receive increased attention as the current Administration attempts to identify potential budget reductions in assistance programs.

It is true that some of the important questions are not totally in the realm of economic research. However, economists, as contributors to the policy process, serve the important role of being able to consider possible effects of program changes. The ERS economic models of FSP participation and the effect of program participation on food expenditures, for example, allows us to estimate possible impacts of changes in program operation at the national level. In addition, it permits the comparison of different proposed program changes, thereby facilitating selection of the most efficient option.

Meetings such as this provide you with an opportunity to share your ideas on what you perceive to be the important policy issues of the future with those of us at USDA and other members of the economic research community. I look forward to discussing these ideas with you.

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AWAY FROM HOME FOOD CONSUMPTION PRACTICES AND NUTRIENT INTAKES OF YOUNG ADULTS

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ABSTRACT

Little is known about the relative importance of factors which determine various away from home food behaviors or the nutritional impacts of such practices. This study identifies factors associated with restaurant, fast food, and cafeteria consumption for young adults, and measures the subsequent nutrient intake impacts over 24-hour periods of time.

INTRODUCTION

Within the nutrition community, increasing attention is being devoted to determination of the dietary impacts of away from home food consumption patterns. Between the 1965-66 and 1977-78 collections of the Nationwide Food Consumption Survey (NFCS), the percent of the household food dollar allocated to food consumed away from home rose from 16 to 24 percent (9). This expenditure trend has been attributed, in part, to increases in real income, shifts to smaller household sizes, and increasing levels of female employment (5, 8, 10). However, little is known about the relative importance of factors which determine the types of away from home food locations selected by consumers, or the overall nutritional impacts of such consumption practices.

Another body of research currently centers on the elucidation of relationships between dietary intake patterns and the development and progression of chronic, degenerative disease states. In particular, atherosclerosis, hypertension, and various cancers have been, in part, causally linked to dietary and nutrient intake patterns. If demographic and lifestyle trends such as rates of female employment or social uses of food are linked to significant changes in individual family member food consumption patterns, then any subsequent nutrient intake differences may explain an increasing proportion of the population incidence of selected chronic diseases. This study is a preliminary attempt to identify factors associated with individual young adult away from home food consumption patterns, and to relate such food practices to variations in nutrient intake for these individuals.

The shift to more frequent away from home food consumption may raise a number of new consumer issues. As the health stock of the population at large shifts to encompass more chronic disease morbidity and mortality, the consumer will require more than traditionally provided sources of health information and treatment. For example, if individual health promotion activities--such as eating a diet which conforms with the suggested Dietary Guidelines (2)--can influence individual health outcomes, then the consumer will need sufficiently accurate information regarding causal relationships between dietary practices and the risk of developing chronic disease states. Since consumers eat food rather than nutrients, per se, appropriate nutrient composition information for foods eaten both at home and away from home will be necessary. This becomes more important as the knowledge of diet-disease relationships becomes more clear. Shifts in health manpower may be necessary to communicate diet and food composition information. Improved understanding of food consumption behaviors may result in shifts in national policies to influence food consumption. Consumption disincentives might range from artificially increasing retail prices of foods or meals deemed to be 'less healthy', to the establishment of nutritional eligibility criteria for federal food programs participation.

METHODS AND DATA

This research first measures the importance of household income, usual food preparer employment and value of time patterns, family composition, and individual food selection autonomy in explaining differences in individual levels of away from home food expenditures. Away from home consumption is described as a series of three expenditure categories which include expenditures at sit down restaurants, expenditures at fast food and convenience store locations, and expenditures at school or work cafeterias. The food location categories reflect dissimilar food service characteristics and bundles of food attributes such as convenience recreation, or atmosphere. It has also been suggested that the nutrient density availability differs between food locations.

Employment status, as well as hours employed per week are measured. Family composition is defined as numbers of preschoolers, numbers of school age children, and numbers of adults. The autonomy variable is a dichotomous variable meant to differentiate between those more under the control of the usual food processor and those with more meal and food selection freedom. The full expenditure models include individual control variables such as age, sex, ethnic background, and anthropometric status which may affect food consumption behavior.

In the second section of analyses, the same set of explanatory variables used in the expenditure analyses are used to explain variation in average 24-hour nutrient intakes. Although the complete analysis covers 15 nutrients, results in this paper are confined to intakes of energy, protein, fat, vitamin B6, vitamin A, and calcium. This section is useful for evaluating the assumption that factors which determine food intake similarly affect nutrient intake.

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In the final portion of the analysis, food consumption practices--in part measured as food category expenditures and weekly meal type frequencies--are used to explain variations in daily nutrient intake patterns of individuals. If individuals primarily select foods for characteristics other than nutrients, then a reduced form specification of this nature is most appropriate.

Individual level data from the Basic sample of the 1977-78 Nationwide Food Consumption Survey are used. An initial sample of 2302 individuals between the ages of 15 and 35 years were selected. If pertinent individual or household level data were missing, or dietary information incomplete or not representative of usual intake, individuals were deleted from the sample. A final sample of 1859 individuals is used for the analysis.

All away from home expenditure equations are estimated with Tobit analysis, a form of maximum likelihood estimation appropriate when one observes positive expenditure levels for some consumers, but zero expenditures for all others who cannot express disutility with negative expenditures. The two set of nutrient equation estimations use Ordinary Least Squares (OLS) analysis.

RESULTS

Food Expenditure Analyses

Numerous sample individuals reported away from home food consumption. Table 1 presents mean expenditure levels for day one of the survey data by food location and meal type.

Table 1. Mean Away From Home Food Expenditures, By Meal Type and Food Location, Day 1 NFCS.

	Restaurant $$	Fast Food $$	Cafeteria $$
Breakfast	$1.68 (n=35)	$0.92 (n=22)	$0.54 (n=32)
Brunch	1.98 (n=4)	1.40 (n=2)	0.74 (n=10)
Lunch	2.11 (n=90)	1.40 (n=161)	0.74 (n=324)
Supper	3.95 (n=62)	1.98 (n=63)	0.93 (n=23)
Snack	1.58 (n=29)	0.73 (n=88)	0.44 (n=125)
Average Meal $$	2.91	1.50	0.66

The Tobit expenditure analyses suggest that household characteristics--particularly characteristics of the person who usually plans and prepares food for other household members--strongly influence individual away from home expenditure patterns. For example, as seen in Table 2, young adults residing in household with employed food processors spend $2.47 more per day for restaurant food, and $1.10 more per day for fast food than do individuals in households in which the person who usually plans and prepares meals does not work outside the home.

Table 2. Factors Associated With Individual Away From Home Food Expenditures, Tobit Coefficients and t-Statistics.

	Restaurant $$	Fast Food $$	Cafeteria $$
Employment of Food Processor (1=yes)	2.47 (2.27)	1.10 (2.44)	0.16 (0.75)
No. Preschool Age Children	-0.87 (2.67)	0.05 (0.49)	-0.06 (0.98)
No. School Age Children	-0.20 (1.43)	0.61 (1.32)	0.04 (1.57)
No. Adults	-0.14 (0.57)	0.12 (1.67)	0.00 (0.07)
Single Household Head (1=yes)	0.61 (1.39)	0.33 (1.99)	0.14 (1.69)

The age composition of the household also affects how individual family members allocate time, and therefore, food consumption patterns at home and away from home. Tobit analyses indicate that the presence of preschool age children has a negative impact on individual restaurant expenditures. These results tend to support earlier research (6) noting that individuals from households with preschool age children eat out less frequently. But, the results also suggest that the expenditure impact of preschool age children may differ considerably among types of food outlets.

For each additional school age child or household adult, individual restaurant expenditures decline, but fast food expenditures increase-- a substitution similar to what is suggested for individuals in households with preschoolers. In general, the family composition variables suggest that individuals from larger households tend to spend less in restaurants, but more for fast food, all other factors equal.

Individuals from single head households--male or female--exhibit interesting away from home expenditure patterns. In all categories, the regression coefficients indicate that individuals from single headed households spend more for food away from home than do counterparts in two head households. A reasonable explanation may be that a single household head who is also the primary food processor may have fewer at home labor substitutes for at home production.

In previous studies, it has been suggested that the number of hours worked by the female head of household affects individual away from home expenditure patterns (4). Similarly, it has been also suggested that younger women who work outside the home spend more for food away from home than do older counterparts who also work (7). The results of this analysis do not support either of these expected behaviors.

The effects of income and Food Stamp bonus income on away from home food expenditures have also been calculated. At sample means, the income elasticity for *all* food purchased away from home is 0.475--a figure somewhat lower than elasticities estimated in earlier works (3, 11). However, income elasticities estimated in specific away from home categories range from 2.00 for restaurant food, 0.92 for fast food, to a low of 0.18 for cafeteria food. The range of these elasticities indicates that consumers have quite different preferences and behaviors regarding food in different settings. This result also argues for disaggregation of the away from home food dollar in future analyses.

Individuals in households participating in the Food Stamp Program also exhibit consistent away from home expenditure behaviors. All Food Stamp bonus elasticities are negative. That is, a 10 percent increase in the Food Stamp bonus would be expected to result in a seven percent decline in restaurant expenditures for these persons. Also, a similar Food Stamp bonus increase would be associated with a two percent decline in both fast food and cafeteria expenditures as well. The consistency and statistical strength of the negative coefficients suggest that individuals in Food Stamp households substitute food purchased with Food Stamps for consumption at home, in place of food that would have been purchased away from home if the Food Stamp subsidy were given in a cash form.

The expenditure analyses indicate that individual expenditure patterns reflect household interdependence. In particular, the employment status of the usual food processor affects his or her value of time, as do the ages and numbers or family members. Therefore, the usual food processor plays an important role in determining food patterns of other household adults. Individual consumption behaviors are therefore more complex than suggested by many traditional economics models. These results suggest that more detailed time expenditure data for households, rather than solely individuals, would be useful for predicting away from home food pattern differences.

Nutrient Analyses

While employment status of the food processor, household composition, and income have relatively clear impacts on individual away from home food expenditure patterns, the relationships do not hold for individual nutrient intake patterns. While young adults in households with an employed food processor do appear to consume more energy, protein, and fat over a 24-hour period, *ceteris paribus*, concommitant increases in other micronutrient intakes are not observed. Although it is frequently assumed that food-income elasticities are in some sense paralleled by nutrient-income elasticities (1), results of this analysis counter this usual view. While higher levels of household income are associated with greater individual away from home expenditures in all categories, as seen in Table 3, higher incomes have no association, or are associated with lower 24-hour nutrient intakes of all nutrients studied when all other factors are equal.

Table 3. Selected Factors Associated With 24-Hour Nutrient Intakes, OLS Coefficients and t-Statistics.

	Household Income	Education of Food Processor	Autonomy Scale
Energy	0.000	-2.45	-168.44
(kcal)	(0.01)	(0.33)	(4.78)
Protein	-0.001	0.15	-7.62
(gm)	(1.60)	(0.43)	(4.77)
Fat	-0.000	-0.14	-9.08
(gm)	(0.17)	(0.34)	(4.75)
Vitamin B6	-0.00005	0.005	-0.15
(mg)	(2.15)	(0.66)	(3.86)
Vitamin A	-0.097	279.78	-622.16
(IU)	(0.64)	(4.38)	(2.05)
Calcium	-0.016	16.53	-101.80
(mg)	(1.46)	(3.65)	(4.73)

Educational level of the usual household food processor is negatively associated with levels of individual energy intakes. That is, individuals in households in which the food processor is more highly educated consume fewer calories during a 24-hour period when all other factors are held constant. However, processor education is positively associated with intakes of calcium and Vitamin A--two nutrients frequently underconsumed by large segments of the U.S. population. The degree of individual food selection autonomy is also an important determinant of individual nutrient intakes. For every nutrient studied, individuals who were classified as 'more autonomous' consumed lower 24-hour intakes. This is a direct contrast to the estimated away from home expenditure behavior in which more autonomous individuals consistently spent more for food in each away from home food category. The autonomy scale was designed to differentiate among adults more and less under the dietary control of the usual food processor. The results indicate, therefore, that the strength of family expectations and the degree of control the usual food processor has over food availability are important factors in describing overall nutrient intake patterns in young adults. While the strength of the food processor-nutrient intake relationship has been noted with respect to intakes by children, this evidence supports the relationship in adults as well.

Food Expenditures as Nutrient Intake Determinants

In the last set of estimations, food consumption practices--described in part, as three categories of actual individual food expenditures outside the home, a per capita estimate of at home food expenditure, and frequencies of various types of meals--are used to describe variations in observed nutrient intakes among individuals. While this type of model has no predecessor in multivariate analyses, it is conceptually reasonable to expect that levels of nutrients consumed will depend on, and be explained by, patterns of food consumption.

As seen in Table 4, all other factors equal, an extra dollar of expenditure in differing types of food locations is associated with differing levels of nutrient intake impacts. An extra dollar of restaurant expenditure is associated with consumption of 33 additional calories per day. An extra dollar for fast food is associated with consumption of 94 additional kilocalories, while a dollar spent for cafeteria food is associated with consumption of 121 additional calories during a one-day period. In contrast, an extra dollar spent for food at home results in intakes of 15 additional calories.

Table 4. Selected Nutrient Intake OLS Coefficients Food Expenditures as Independent Variables, Adults Ages 15-35 Years, 1977-78 NFCS.

	Restaurant $$	Fast Food $$	Cafeteria $$	At Home $$
Energy	33.4	93.8	121.0	15.4
(kcal)	(2.10)	(3.07)	(2.46)	(6.56)
Protein	1.42	1.33	2.94	0.76
(gm)	(1.99)	(0.97)	(1.33)	(7.27)
Fat	1.90	3.41	3.78	0.64
(gm)	(2.18)	(2.03)	(1.40)	(5.02)
Vitamin	0.03	0.00	0.05	0.02
B6 (mg)	(1.60)	(0.06)	(1.02)	(6.21)
Vitamin	28.90	-954.00	232.00	50.60
A (IU)	(0.21)	(3.54)	(2.64)	(4.33)
Calcium	-2.83	-17.50	80.27	6.29
(mg)	(0.29)	(0.93)	(2.64)	(4.33)

The positive relationship between cafeteria expenditures and calcium intake probably reflects school lunch consumption by older teenagers. All expenditure coefficients are positive in explaining daily fat intake. But, every additional dollar spent in fast food locations or cafeterias has a much larger dietary effect than does a dollar of restaurant or at home expenditure. In relation to nutrient intake requirements, the large marginal negative coefficient associated with fast food expenditure for Vitamin A is significant and nutritionally important.

Table 5 presents meal frequency means, while Table 6 presents OLS meal frequency coefficients used to explain variation in nutrient consumption. Viewed together with the food expenditure coefficients, this set of variables provides a description of both daily and usual (weekly) food consumption practices.

Table 5. Weekly Meal Frequencies, Means and Standard Deviations.

	Mean	Standard Deviation
No. At Home Breakfasts/Week	5.1	(2.7)
No. At Home Lunches/Week	4.2	(2.6)
No. At Home Suppers/Week	6.0	(1.6)
No. Away From Home Meals/Week	3.0	(3.8)
Estimated Per Capita At Home Food Expenditure/ Week	$14.84	(6.9)

Table 6. Selected Nutrient Intake OLS Coefficients Meal Frequencies as Independent Variables, Adults Ages 15-35 Years, 1977-78 NFCS.

	No. At Home Breakfasts	No. At Home Lunches	No. At Home Suppers	No. Away From Home Meals
Energy	59.9	58.5	42.1	41.7
(kcal)	(9.36)	(5.93)	(2.81)	(5.00)
Protein	2.6	2.4	2.2	1.8
(gm)	(8.99)	(5.38)	(3.20)	(4.53)
Fat	2.9	2.8	1.8	2.1
(gm)	(8.10)	(5.20)	(2.14)	(4.53)
Vitamin	0.05	0.04	0.03	0.03
B6 (mg)	(7.68)	(3.69)	(1.72)	(3.14)
Vitamin	156.3	85.8	260.6	115.3
A (IU)	(2.75)	(0.98)	(1.96)	(1.56)
Calcium	37.2	16.4	16.9	12.8
(mg)	(9.38)	(2.68)	(1.8[illegible])	(2.48)

DISCUSSION

It is difficult to interpret and apply the direct expenditure and meal frequency results. The pure expenditure coefficients do not indicate if foods consumed at various away from home locations substitute for meals normally consumed at home, or if they supplement at home meals. Although a positive correlation exists between the estimate of at home expenditure and restaurant expenditure, no association exists with food or cafeteria dollars.

It is possible, however, to use these data to construct hypothetical situations and simulate food pattern-nutrient intake relationships. Table 7 presents estimates of net changes in 24-hour nutrient intakes as various types of meals consumed away from home substitute for at home meals. Variables allowed to vary include the appropriate at home and away from home expenditure categories, the at home meal type frequency variable, and the variable measuring number of meals consumed away from home. The simulations include 1) substitution of a fast food breakfast for breakfast at home, and 2) substitution of a fast food lunch, a restaurant lunch, or a cafeteria lunch for a lunch consumed at home. In all cases, it is assumed that the away from home meal expenditure level is equal to the population mean ($0.96 for fast food breakfasts, $2.14 for restaurant lunches, $1.37 for fast food lunches, and $0.61 for cafeteria lunches). Since no direct measure of at home expenditure is available, rough estimates of breakfast and lunch costs are calculated. Mean at home per capita per day food expenditure is $2.12 for this sample. On average, 21 percent of all energy was consumed at breakfast, 33 percent was consumed at lunch. These percentages were used to estimate an average breakfast at home cost of $0.45 and $0.70 for lunch at home.

Table 7. Predicted Changes in 24-Hour Nutrient Intakes. Substituting Various Away From Home Meals for At Home Meals.

	Fast Food Breakfast	Restaurant Lunch	Fast Food Lunch	Cafeteria Lunch
Energy (kcal)	65	42	100	74
Protein (gm)	0.2	1.9	0.7	0.7
Fat (gm)	2.2	2.9	3.5	1.1
Vitamin B6 (mg)	-0.024	0.029	-0.023	0.01
Vitamin A (IU)	-934	56	-1300	135
Calcium (mg)	-39	-14	-32	41

As an example, if a consumer substitutes a fast food breakfast for one that would have been consumed at home, these results predict that the individual will consume 65 more calories per day, all other factors equal.

In all simulations, consumers are predicted to eat greater quantities of the macronutrients, energy, protein, and fat over the 24-hour period. While the protein results are not large enough to have any nutritional significance, the positive energy and fat impacts are of interest. These results suggest that as individuals consume more meals outside the home, daily caloric intakes rise relative to intakes where less away from home consumption occurs. If concurrent increases in activity and energy expenditure do not accompany such food practices, the positive energy balance will lead to weight gain. The adverse effects of overweight are well known. Similarly, if away from home consumption, particularly at fast food restaurants, is a consistent practice, the increased fat intakes may assume a health risk. Increased total fat intakes have been linked to increased rates of cardiovascular disease and the hormonally linked cancers. Although it was not possible to measure saturated versus polyunsaturated fat intake, these results suggest this as an important avenue for future study.

The decline in Vitamin A intakes associated with fast food consumption is large and of nutritional importance. For example, the known male requirement for Vitamin A (the RDA) is 5000 IU per day. These results suggest that an average person substituting a lunch a fast food lunch for a lunch at home would be expected to consume more than one quarter less of the daily Vitamin A requirement. While a Vitamin A intake greater than the requirement can be stored in the liver for future periods of inadequate intake, consistent underconsumption of Vitamin A has been linked to the development and progression of epithelial type cancers.

SUMMARY

The amounts of money that individual adult consumers spend away from home for food in different food locations are strongly influenced by the level of household income, employment and value of time characteristics of the person who usually plans and prepares food for household members, and the presence of other household adults and children. Individuals who use food as a socialization medium consistently spend more for food away from home in every category. In contrast, invididuals with less food decision autonomy spend less away from home in each location category than do individuals with wide food decision making powers.

The food expenditure analyses results imply that significant intrahousehold influences exist which influence away from home food behaviors of household adults. It is generally assumed that adults, in particular the female head of household, influence food consumption practices of children. This study provides empirical evidence that characteristics of the usual food processor affect away from home food practices, not only for themselves, but also for other family members between the ages of 15 and 35. Since young adults of these ages are generally in the first stages of forming primary household units, one way to influence individual food practices is through the influence of the person who plans and prepares foods. To a degree, the Lewin concept of gatekeeper is reaffirmed for young adults.

As young adults form family units, and household composition changes, it appears that individual away from home consumption and expenditure patterns shift. Any study which wishes to explain individual expenditure variation or use expenditure behaviors to predict health or other types of outcomes must recognize the behavioral influences of family composition.

Whereas household income, employment status of the food processor, and household composition strongly influence individual food purchasing behaviors, these factors appear to have much less effect on nutrient intake patterns. In particular, in this sample, household income has either no influence, or a negative influence on daily nutrient consumption patterns.

Results of the nutrient analyses do suggest that some educational spillover effects occur among family members. That is, the level of education of the usual food processor seems to influence the level of individual intake of calcium, riboflavin, Vitamin B12, Vitamin A, and Vitamin C. There appear to be few effects for other measured nutrients including the B vitamins and iron. These results suggest that 'generic' food education--eat dairy products, fruits, and vegetables--may effectively increase consumption of calcium, Vitamin A, and Vitamin C rich foods. However, more specific educational efforts may be necessary to identify food sources of nutrients such as magnesium, iron, or Vitamin B6 which are underconsumed by large segments of the young adult population. Similarly, educational levels appear to have no effect on the amounts of fat consumed. This points to a need for more specific food composition and dietary intake-health outcome education for both individuals and for those who prepare foods for others.

Away from home food expenditure practices can also be useful in explaining differences in individual nutrient intake patterns. In all cases, young adults who eat away from home consume more energy per day than those who do not eat out. While the daily difference appears modest, if all other individual energy requirements, exercise levels, etc. were to remain constant among consumers, over a one year time period, the every day fast food patron would be predicted to weigh about 12 pounds more than the non-fast food consumer.

Restaurant and fast food patrons both also consume significantly more fat than do others who do not frequent these food locations. Fast food patrons are noted to consume considerably lower levels of Vitamin A than others, but away from home practices do not appear to significantly affect the overall balance of other nutrient intakes surveyed.

This type of research studies the individual marginal relationships between individual daily nutrient intakes and away from home food consumption behaviors. The population-wide health significance of such work will depend on the frequency with which individuals consume food away from home, the degree to which these food practices affect total nutrient practices, and the degree to which affected areas of dietary intake are associated with increased risks for chronic disease states.

APPENDICES

Appendix 1. Food Expenditure Model Specification

Dependent Variables:
- restaurant expenditures/person/day
- fast food expenditures/person/day
- cafeteria expenditures/person/day

Independent Variables:
- household income/month
- Food Stamp bonus/month
- food processor employed?
- hours employed, food processor
- age, food processor
- age*hours employed, food processor
- age, individual
- sex
- race
- Spanish origin
- Body Mass Index
- in school?
- Southern resident
- suburban resident
- noncity-nonfarm resident
- farm resident
- household has freezer?
- autonomy scale
- food socialization scale
- single head household?
- number preschool age children/household
- number school age children/household
- number adults/household
- number preschool age children*employment
- number school age children*employment
- number adults*employment
- freezer*employment

Appendix 2. Nutrient-Food Pattern Model Variables

Dependent Variables:
- nutrient intake/person/day

Independent Variables:
- restaurant expenditures/person/day
- fast food expenditures/person/day
- cafeteria expenditures/person/day
- per capita at home food expenditure/week
- number breakfasts at home/week
- number lunches at home/week
- number suppers at home/week
- number guest meals/week
- number meals away from home/week
- household income
- family size
- age
- sex

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CONSUMER SCIENCE SYMPOSIUM: ITS APPLICATION TO A DEVELOPING PROGRAM

Roberta Ward Walsh, The University of Vermont[1]

Most of the academicians involved in the Symposium on Consumer Science in Institutions of Higher Education would probably agree that the event marked a unique point in the field. It encouraged introspection for consumer science as a whole, and provided an opportunity for systematic self-analysis by each participating institution in the form of an extensive audit of its program of study.

At the University of Vermont, however, the Symposium had the additional feature of good timing, coming as it did just prior to the development of a new program in the consumer area.

For my part on impressions to the Symposium, I would therefore like to highlight its meaning from the perspective of how it helped us in that regard and how we felt we were able to contribute to the overall effort of which the Symposium was a part.

At the time of the Symposium, consumer studies at the University of Vermont was fully staffed with faculty who were facing decisions surrounding the formulation of degree requirements and related curriculum issues. Further, there was the challenge of identifying consumer studies' relationship with not only its own but also other academic departments campus-wide, the College of Agriculture where it resides organizationally, and Home Economics, a cross-cutting program of the College of Agriculture and the College of Education and Social Services.

The Symposium helped us in the months that followed in three significant ways. First, it demonstrated a sense of unity among both the wide range of institutions represented and the very diverse subject area of consumer science. This led to a feeling that the field had somehow come of age. The bringing together of myriad institutions to focus exclusively on the nature and direction of consumer science was in and of itself a landmark in its evolution as a field of study. At the stage where we were in our development, this helped us recognize that we were indeed a part of a larger fraternity or support system. It heightened the enthusiasm for our task.

Second, we were aided by the interdisciplinary focus that characterized the examination of consumer science at the Symposium. This greatly influenced our development of a curriculum for consumer studies that integrates the social science disciplines of sociology, economics and political science toward a focus on the consumer. When the working papers addressing consumer science in terms of these and other academic disciplines are published in the Symposium proceedings, they will serve as a vehicle for communication between our faculty and appropriate faculty in those disciplines. An anticipated outcome of this relationship will be the opportunity for cooperation in resident instruction and research.

Finally, the career orientation of the Symposium encouraged us to build flexibility in our program for a broad range of students with differing career goals. Accordingly, our curriculum enables a student to prepare for a future in business, social services, education, extension work or graduate study. Consistent with the identification of home economics at the University of Vermont as a multi-disciplinary academic endeavor, a separate set of degree requirements is available for the student who desires a home economics degree with a professional concentration in consumer studies.

Having gone through a great deal of soul-searching in the months following the Symposium, our team of faculty and administrators cooperated in a consensus fashion in responding to the thought-provoking program audit which occurred immediately following our curriculum development efforts. Thus, our completion of the audit represented the results of the combined insights of a small group of forward-looking practitioners in higher education, rather than the limited viewpoint of a single individual. We hope, therefore, that when results of the program audits are made available nationally, our responses will assist other institutions who may also be developing new programs.

We were pleased to have been a part of the Symposium and believe that its ultimate achievement will be a promising future for consumer science in higher education.

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CONSUMER SCIENCE AT THE CROSSROADS?

Roy Savoian, Purdue University[1]

ABSTRACT

Consumer science as a field of study appears to find itself at the proverbial crossroads in terms on its evolution towards disciplinary status. The author contends that consumer science is currently confronted with an "identity crisis" which might well inhibit the evolutionary process. If consumer science is to emerge as a discipline, consumer scientists must satisfactorily resolve two fundamental issues: (1) the conceptualization of consumer science in terms of its focus and scope; and (2) the practical matter of consistent academic program development.

During the Consumer Science Symposium last summer at the University of Wisconsin-Madison, consumer scientists gathered to discuss a wide-range of conceptual and practical matters pertaining to consumer science in higher education. The congenial ambience and fruitful exchange of information and ideas accentuated the rich diversity of opinion regarding consumer science--past, present and future. What emerged from the Symposium can be characterized as an introspective assessment of the "collective self" shared by consumer scientists.

It is useful for purposes of this paper to delineate the substantive aspects of this introspective assessment by focusing on two fundamental, albiet interrelated, issues which confront academics and practitioners in the consumer science field. The first issue involves the conceptualization of consumer science as a field of study while the second concerns practical matters of academic program development. As will be suggested below, these two issues converge to engender what might be termed the "identity crisis" in consumer science.

CONCEPTUALIZATION OF CONSUMER SCIENCE

The consumer--whether defined as an individual or as the family-unit--is a multidimensional subject for inquiry. The study of the consumer possesses a certain uniqueness due in part to the diversity of internal (psychosocial, economic) and external factors affecting consumer behavior. Psychological considerations (e.g., basic needs requirements, "seeking pleasure while avoiding pain", cognition), social stimuli (e.g., cultural norms, societal values) and the economics of earning and spending a living create a matrix of behavioral possibilities directed toward employment (means) and the achievement of a subjectively determined standard-of-living (ends). Furthermore, external factors such as public policies, business practices, education and political/social institutions produce varying influences on consumer behavior and the decision-making process. The interactive effect of these internal and external factors defines the focus and scope of consumer science as a field of study.

Another contributor to the conceptualization of consumer science encompasses the varying perspectives and approaches associated with economics, psychology, law, sociology, education and political science, among others. Each discipline relies on a commonly accepted theoretical framework and set of methodologies that are relevant to the analytics of the consumer. Yet, there is no one discipline that can claim a monopoly for purposes of developing the appropriate focus and scope of the consumer science field. Given the very nature of the subject--the consumer--in terms of behavioral possibilities as determined by internal and external factors, an integrative approach derived from basic disciplines is needed to guide the consumer scientist.

ACADEMIC PROGRAMS IN CONSUMER SCIENCE

A critical issue generally facing consumer scientists is academic program development. The nature of this issue is clearly illustrated by the fact that academic departments, program areas and divisions exhibit a wide variety of titles and curricula. The development of consumer science in higher education requires: (1) a distinguishable, consistent core curriculum; (2) electives courses that offer flexibility in terms of public or private sector emphasis; and, (3) educational enrichment in terms of field-training and/or internship experience.

A core curriculum which is consistent across consumer science programs is important at both the undergraduate and graduate levels. The content of the core should be designed to develop communication, interpersonal, analytical and quantitative skills, respectively, and to improve knowledge levels in consumer behavior, law and related areas. Analytical and quantitative skills include, but are not limited to, math/statistics, computers, benefit-cost analysis and survey methodologies. In addition, students with a private-sector emphasis should develop a fundamental understanding of business decisions and organizational behavior. Finally, a national internship program (similar to NCAI) at the undergraduate level should be developed in order to provide an opportunity for educational enrichment and on-the-job exposure to consumer problems.

Academic program development in terms of curriculum content and educational enrichment depends on an identifiable concept of the consumer science field. At present, the conceptualization of consumer science has not progressed on a national level to the point of providing guidance and direction for the development of a consistent consumer science program in higher education. As a consequence, consumer science suffers from an identity crisis.

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IDENTITY CRISIS IN CONSUMER SCIENCE

What is a consumer scientist? An answer may not be readily discernible, particularly among those outside the consumer science field.

If the same question is asked about a chemist, accountant or mathematician, a commonly accepted and understood meaning is conveyed by each term. In other words, each designation possesses a distinguishable set of attributes related to academic training, employment and the like. In order to achieve a similar level of recognition, consumer science must necessarily define the focus and scope of the field while developing consistency in its academic program in institutions of higher education. A failure to accomplish these tasks will only inhibit the emergence of consumer science to a disciplinary status.

A SURVEY OF COURSE SYLLABI:
CONSUMER ECONOMICS, FAMILY ECONOMICS, AND PERSONAL FINANCE

Mohamed Abdel-Ghany, The University of Alabama[1,2]

ABSTRACT

Syllabi of undergraduate courses offered in 23 institutions of higher education in the areas of Personal and Family Finance, Family Economics, and Consumer Economics were examined. Whereas the topics covered under the area of Personal and Family Finance were generally similar among the surveyed institutions, they differed to a certain extent in the area of Consumer Economics, and to a greater extent in the area of Family Economics.

The purpose of this study was to survey syllabi of undergraduate courses in the areas of Personal and Family Finance, Family Economics, and Consumer Economics. The survey included: (1) title of the course, (2) description of the course, (3) most common topics covered, and (4) least common topics covered.

Participants in the Symposium on Consumer Science in Higher Education, held in Madison, Wisconsin, July 1982, were requested to send syllabi of undergraduate courses taught at their departments to the author. Table 1 presents the cooperating institutions and the courses offered at their departments in those three areas.

Table 1. Participating Institutions

Institutions	Personal and Family Finance	Family Economics	Consumer Economics
Colorado State University	*		*
Cornell University	*		*
Howard University	*		*
Iowa State University	*		*
Kansas State University	*	*	
Michigan State University	*		*
Purdue University	*	*	
Ohio State University	*		
Oklahoma State University	*	*	
Oregon State University	*	*	*
Texas Woman's University	*	*	
University of Alabama	*		*
University of Arizona	*	*	*
University of California at Davis	*		*
University of Illinois	*	*	*
University of Kentucky	*	*	
University of Maryland			*
University of Missouri	*		*
University of Tennessee	*	*	*
University of Utah		*	
University of Vermont			*
University of Wisconsin		*	*
Virginia P. I.	*		

Nineteen departments out of a total of 23, offered a course in Personal and Family Finance, 11 departments offered a course in Family Economics, and 15 departments offered a course in Consumer Economics. It can also be seen from Table 1 that only four departments offered courses in two areas, and five departments offered courses in only one area.

Personal and Family Finance

The following statement is similar to many descriptions used to describe the courses offered in this area: "management of individual and family financial resources as related to credit, savings, investments, insurance, taxes, housing, retirement, and estate planning."

The following titles were used by the participating departments to designate the courses taught in the area of Personal and Family Finance.

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[2] The author wishes to acknowledge the helpful assistance of Donna Dismukes.

Title of course	No. of institutions
Personal and Family Finance	5
Family Financial Management	5
Personal Finance	3
Family Finance	2
Consumer Education and Family Finance	1
Management of Family Resources	1
Personal Financial Management	1
Family Financial Planning	1

The most common topics covered under this area are the following: income determinants, consumer decisions and value clarification, budgeting and record keeping, credit, life insurance, health insurance, homeowners insurance, liability insurance, auto insurance, homeownership, personal income taxes, savings accounts, investments, retirement-social security and planning, and estate planning.

The least common topics taught in this area are the following: wealth maximizations; inflation; real estate; checking accounts and other bank services; gold, coins, stamps, and art commodities; appliances as a budget item, food as a budget item, clothing as a budget item, medical care as a budget item, transportation as a budget item, recreation as a budget item, education as a budget item, consumer protection, and marriage myths and money.

Family Economics

The definition developed by NCR-52 (North Central Regional Technical Committee on Family Economics Research) was chosen by the author to describe the courses offered in this area, since it represents most of the definitions offered by the surveyed institutions. The definition states that Family Economics "is concerned with the determinants of levels of living of families and individuals and with the possibilities for changing these levels to better meet personal and social goals. It is based on the principles and concepts of allocation related to the development, acquisition, maintenance, and conservation of scarce resources in productive activity and end uses by families and individuals as they interact with other social and economic systems to achieve their standards of living." (Ritchey, 1978)

The following titles were used by the surveyed institutions to designate the courses taught in this area:

Title of course	No. of institutions
Family Economics	7
Economics of the Family	1
Resource Management for Individuals and Families	1
Family Economic Resources	1
Family Economics and Management Issues	1

The most common topics taught in this area are the following: American families and their characteristics; the family as an economic unit; economic well-being and quality of life; the welfare system and policies-poverty; labor force participation-women; household production; family income analysis and distribution; family expenditure analysis; lifestyles and values; housing; marriage, divorce, and parenthood; taxes; insurance; and credit.

The least common topics included in the content of courses in this area are: fertility, social security, consumer demand and information, consumer price index, consumer protection and the consumer movement, financial planning, energy, estate planning, retirement planning, investment, and consumption theories.

Consumer Economics

The author used the definition developed by the NCR-52 committee to identify courses taught in this area. It is defined as "the study of economic interactions of consumers with the external environments. It involves economic analysis of market and non-market consumption activities, incorporating relevant social, psychological, political, and ecological considerations." (Ritchey, 1978).

The following titles were chosen by the surveyed departments to designate the courses taught in this area:

Title of courses	No. of institutions
Consumer Economics	6
The Consumer and the Market	4
Consumer Economics and Public Policy	1
Consumer Behavior	1
Consumer Economic Problems	1
Economics of Consumer Policy	1
Consumer Resource Management	1

The most common topics covered under this area are: economic system and consumer's role in the economy, consumer sovereignty, consumer information and public policy, the consumer movement-consumer rights and responsibilities, consumer protection, advertising and the consumer, consumer redress, product testing, product quality and labeling, consumer effective purchasing decisions, market structure and pricing, typology of consumer values and lifestyles, consumer and risk and uncertainty, and consumer organizations.

The least common topics taught in this area are: human capital models, consumption theories, standard and level of consumption, consumer indexes, models of time allocation and household production theory of utility maximization, Engel curves and demand functions, consumer education, welfare programs, insurance and health care, credit, transportation, housing, energy, clothing, banking savings, investment, a theory of extramarital affairs, external diseconomies.

CONCLUDING REMARKS

There was a consensus regarding the topics covered under the area of Personal and Family Finance. The least common topics referred to in the body of the paper were additional topics to the most common ones taught in the area by most institutions. This consensus is perhaps due to the fact that textbooks in this area are very well developed and cover the same topics in general.

There was wide variety of topics, however, covered under either the Family Economics courses or the Consumer Economics courses. The author is disturbed with the fact that some departments offer courses with titles such as Family Economics, however, the contents of the courses include mainly topics that should be covered under courses in Consumer Economics or Personal and Family Finance. Also, other institutions, had a very shallow coverage of topics under either the Family Economics or the Consumer Economics area. This is due to a less consensus on defining the two areas of Family Economics and Consumer Economics. Also textbooks in those two areas are few and generally do not cover but part of the topics that instructors wish to teach in those two areas.

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AN EVALUATION OF COURSE SYLLABI IN CONSUMER SCIENCE

Margaret Charters, Syracuse University[1]

ABSTRACT

The course syllabi in consumer science submitted by the Wisconsin Symposium participants in the five areas of consumer protection, home and family management, equipment and energy, housing and special topics are summarized.

Consumer Science Symposium participants submitted all their consumer science course syllabi for this project. The syllabi in the content areas of Consumer Economics, Consumption Economics, and Family Economics (including Family Finance) were separated for analysis by Dr. Abdel-Ghany. All the other syllabi were forwarded to Syracuse for analysis.

The content of these syllabi fell into five categories: consumer protection, home and family management, equipment and energy, housing and special topics. One of the major limitations of this study, is that only those syllabi that participants themselves classified as consumer science were forwarded. Therefore, syllabi may be missing in areas where there is a difference of opinion among participants as to what to include in consumer science. Another limitation is that our resources did not permit an extensive follow-up program to ensure that syllabi were received for every course offered. The courses will be discussed in the above-mentioned categories. An underlying assumption made in this paper is that required textbooks reflect the operational approaches to course content. A bibliography of the required texts for all the categories is included at the end of the paper.

CONSUMER PROTECTION

Eighteen programs offered courses which fall under the general designation of "Consumer Protection". They varied greatly in their content but can generally be divided into three groups: General Consumer Protection, Consumer and Family Law, and Special Applications. The course titles are listed in Table 1.

Ten courses are grouped in the General Consumer Protection category. Nine of these are undergraduate courses, none of which appear to have pre-requisites. Of these nine, five require Feldman's Consumer Protection as a text book. Two courses use Swagler's Consumer and the Market. Garman and Eckert's The Consumers' World, Dorfman's Consumer Survival Kit and Aaker and Day's Consumerism are each required by one course as shown in Table 2. The courses generally follow the outlines of the texts. Most courses follow the format of lecture-discussion with exams (1-9) and a term project. The term projects were mainly position papers on current consumer issues. Colorado State required the use of a proposed rule published in the Federal Register. Ohio State required 50% of the data/information collected to be based on field interviews or studies.

Some interesting variations emerged. The University of Kentucky had students contract to earn a pre-established number of points from a collection of mini projects. Some of these included the comparison of small claims cases, product warranties, auto insurance contracts and availability

TABLE 1. Titles of Consumer Protection Courses

General	Alabama	Consumer Protection
	Colorado	Consumer Issues & the Market
	Howard	Issues in Consumer Affairs
	Kan. St.	Consumer Action
	Kentucky	Consumer Issues
	Ohio St.	The Consumer and the Market
	Ore. St.	Decision Making and the Consum.
	Syracuse	The Consumer and the Market
	Utah	Contemporary Consumer Issues
Law	Cornell	The Consumer and the Law
	Iowa St.	Family Law
	Maryland	Consumer and the Law
	Mich. St.	Families: Con. Reg. & Partic.
	Ok. St.	Con. Law Effect on Family
	Vermont	Consumer Law
Special Applic.	Cal: Dav.	Economics of Consumer Policy
	V.P.I.	State/Local Consumer Protect.
	Wis: Mad.	Consumer Legislation

TABLE 2. Required Textbooks for Consumer Protection Courses

General:	Alabama	Feldman
	Colorado St.	Feldman
	Howard	Feldman
	Kansas St.	Dorfman
	Kentucky	Garman and Eckert
	Ohio St.	Swagler
	Oregon St.	Feldman, Swagler
	Syracuse	Feldman
	Utah	Aaker and Day
Law:	Cornell	
	Iowa St.	
	Maryland	Feldman
	Mich. St.	
	Ok. St.	Feldman
	Vermont	
Special:	Cal: Davis	
	V.P.I.	
	Wis: Madison	Feldman

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of advertised specials. The University of Utah focused its course around a series of eight student debates on topics ranging from traditional narrow issues to those relating to the natural environment and even the international scene.

The nature of the six Consumer Law courses varied widely. The Maryland course, taught by a lawyer/professor is unique. Students analyze the nature of three consumer protection tools available under the law to policy makers: information, intervention and government restriction of consumer choice, and compensation payment. Students explore the legal opportunities and limitations of these and are expected to develop theories for their application in substantive areas selected from current consumer problems. A broad perspective on consumer protection is achieved viewing Feldman through the law to produce an analytical rather than a descriptive course.

Oklahoma State also used Feldman in conjunction with Epstein and Nickles's Consumer Law to deal with consumer credit, tax law, estate planning and family law as well as consumer protection. At Cornell, the first half of the semester is devoted to products liability. The second half deals with consumer frauds, FTC, FCC, FDA, consumer credit, class action and the Agency for Consumer Advocacy. Its extensive bibliography is primarily from cases and law journal and law review articles.

The other courses might be described as introductory law courses that use case and statute examples of particular interest to consumers. Schrag's Counsel for the Deceived and the Nutshell series on consumer and family law were typical references in addition to law journal and law review articles. These courses are concerned primarily with the historical development of the law and the use of legal references.

Three courses which fall under the general category of consumer protection were developed for quite different purposes. The Wisconsin-Madison course "Consumer Legislation" focuses on the legislative process. It aims to develop an awareness of the functions of legislative enactment, appropriations and oversight: to develop the ability to read, comprehend and evaluate consumer legislation bills and laws; to be familiar with the administrative and regulatory agencies which have jurisdiction over legislation; and to review major federal and state consumer legislation. VPI's course is designed to focus specifically on the effectiveness of state and local consumer protection efforts including the self-regulating efforts of business. The University of California at Davis' course "Economics of Consumer Policy" is intended to illustrate how economic analysis can be employed to evaluate policies affecting consumers. Using a case study approach, this course is organized around the methodological techniques that can be brought to bear on policy questions (e.g., theoretical analysis, single equation models, cost benefit analysis, demand analysis, etc.). It departs from the more traditional consumer protection course organization which focuses on the type of policy. The stated intent is to be "analytical and prescriptive rather than institutional and descriptive."

HOME MANAGEMENT

Altogether, thirty-three home management syllabi were submitted by seventeen institutions. All of these schools reported a basic home management course where the principles of management are studied and applied to the resources of time, energy and money in individual and home situations. Six of these institutions used Deacon and Firebaugh as the textbook, four used Gross, Crandall and Knoll, two used Swanson and two used Paolucci. One used Rice and Tucker. Two institutions used prepared packets of materials, one for a completely individualized learning approach on traditional topics, the other focusing on ten issues confronted by a fictional family. Most of the courses provided additional reading. None of the schools mentioned a home management house. Nine schools offered only one course in home management. Cornell, Illinois, Kentucky, Missouri and Ohio State all offered a second course that was primarily of an application nature. The activities in these courses and also in some of the basic courses included a variety of activities: time management exercises, work simplification projects, decision rule and communications exercises, computer assisted budgeting, hospitality programs, and analysis of case studies collected either from real families or from a literature resource. In addition, Cornell required a field investigation of a stage in family development or a crisis situation and the preparation of extension bulletins for specific family types. Illinois required development of visual aids for use in teaching and a field experience under the supervision of a co-operative extension agent in an EFNEP program.

Schools with more extensive offerings such as Missouri (5), Cornell (4), Ohio State (3), and Kentucky (3) offer upper division courses which provide in-depth study of specific topics such as: time management, work simplification for the physically handicapped, resource management for special groups (handicapped, low income and single), effective decision making, work capacity, applied financial management, measurement theory and research. The only course with a strong economics base was Cornell's "Economic Organization of the Household". It develops a geometrical analysis of elements of a theory of household behavior. It then proceeds to an analysis of household behavior based on market/non-market work, consumption, saving and demand, household formation, break-up, size and structure.

Analysis is limited to the courses submitted. Some assumed omissions, such as a syllabus from Michigan State where one of the textbook authors is on the faculty, emphasize this limitation. Titles and required textbooks are listed in Table 3.

EQUIPMENT AND ENERGY

Altogether there were only fourteen courses in Equipment (4 at Iowa State) offered among eight institutions. Most of these institutions also had major home management offerings. Six of these courses based their content on Peet, Picket & Arnold's text. All of the courses were taught as a combination of laboratory and lecture. The titles listed in Table 4 give some evidence of a variation in emphasis. Oregon taught skills in demonstrating and testing home equipment. Illinois videotaped demonstrations for use in time and motion studies. Missouri permitted a choice of presentation forms: demonstration, TV demonstration, radio script, feature writing. Missouri had emphasis on advertising and analysis of equipment ads.

There were four courses that dealt with specific types of equipment or special areas of the household, i.e., lighting, food-related major home appliances and kitchen, bath and utility planning. A Kansas State course had an engineering and research thrust which emphasized safety evaluation and methods of surveillance, investigation and reporting.

Three courses were devoted entirely to a study of energy. All three were concerned with present and future alternate forms of fossil and human energy, and the selection of cost-effective sources. Special attention was given to home energy saving methods with an emphasis on home equipment. Kentucky included transportation. Sociological, economic and ecological implications of energy consumption were all addressed.

HOUSING

Only eight institutions submitted housing course outlines. This may indicate that some institutions which offer housing programs do not include them under the rubric of consumer science. Oregon State had the largest offering with six courses. Iowa State had three courses, Kansas State and Ohio State offered two each. Six courses based their content on the Lindamood & Hanna textbook. The course titles and choice of text listed in Table 5 reflect the course content in this area.

TABLE 3. Titles and Texts of Home Management Courses

School	Course No.	Title	Texts
Arizona	HEC 115	Personal Resource Management	Swanson, Udall
Colorado	HC 330	Decision Making: Personal and Family	Paolucci
Cornell	CEH 312	Family Decision Making	
Cornell	CEH 325	Economic Organization of Household	Bryant
Cornell	CEH 411	Time As A Human Resource	Walker
Cornell	CEH 413	An Ecological Approach to Resource Management of Families	
Howard	180-118	Consumer Resource Management	Gordon & Lee, Rice & Tucker
Illinois	FACE 273(U)	Home Management Seminar	Gross, Crandall & Knoll, Paolucci
Illinois	FACE 378(G/U)	Problems in Home Management & Housing	
Iowa	FE 378	Family and Management Patterns	Deacon & Firebaugh
Kansas	FEC 465	Home Management Lab	
Kentucky	FAM 463	Concepts of Personal & Family Man.	Gross, Crandall & Knoll
Kentucky	FAM 464	Application of Personal & Family Man.	Deacon & Firebaugh, Lakein, Levitan
Kentucky	FAM 561	Management for Low Income Families	Levitan
Kentucky	FAM 562	Family Management for Multi Roles	Rapport, Kinzer, Gilbreth
Missouri	FEM 72	Management in Family Living	Swanson
Missouri	FEM 170	Work Simplification	
Missouri	FEM 172	Home Management Laboratory	
Missouri	FEM 372	Family Values & Resource Management (Handicapped, Low Income, Single)	Yankelovich, Steinbeck
Missouri	FEM 378	Effective Consumer Decision Making	Maynes, Lapin
Ohio	HMGT&HS 324.01	Family Management Theory	Deacon & Firebaugh
Ohio	HMGT&HS 324.02	Family Management Application	Deacon & Firebaugh
Ohio	HMGT&HS 627	Home Man., Concepts & Their Measurement	Deacon & Firebaugh
Oklahoma	HDCR 2413	Resource Man. for Individual & Family	Deacon & Firebaugh, Lakein
Oklahoma	HDCR 4420	Family Resource Management	Berry
Oregon	FTM 420	Management in the Home	Deacon & Firebaugh
Oregon	FRM 440	Home Management Theory	
Syracuse	CON 265	Individual and Family Management	Gross, Crandall & Knoll
Tennessee	HE 3510	Family Systems: Family Resources	
Texas Womens	HECS 2773	Home Management in Family Living	Deacon & Firebaugh
Vermont	TMCS 56	Consumer Management Principles	Deacon & Firebaugh, Steidl
VPI	MHFD 3000	Management & Family Decision Making	Levitan
VPI	MHFD 4010	Management of Work Capacity in the Home	

TABLE 4. Equipment Course Titles and Text

Institution	Title
Illinois	Home Equipment
Iowa St.	Equipment in Home
Oregon	Home Equip. Energy Man.
Missouri	Selection of Home Equip.
Missouri	Use and Care of Equip.
Utah	Con. Asp. of Equip. & Furn.
Sp. Areas	
Iowa St.	Modern Light. for Int.
Iowa St.	Food Rel. Major Home Appl.
Iowa St.	Kit., Bath and Util. Plan.
Kan. St.	Kitchen & Utility Areas
Kan. St.	Consumer Product Safety
Energy	
Illinois	Energy in the Home
Mich. St.	Energy Util. in Household
U. of Ken.	Family Energy Consumption

SPECIAL TOPICS

There were six course syllabi that fell outside the categories of consumer protection, home management, equipment/energy and housing. Oregon State offered a course "Community Services and Welfare of Families" which used as its text Melson's Family and Environment - An Ecosystem Perspective. The objectives reflected a strong ecosystem approach with an emphasis on community resources and the process of mobilizing and delivering these to families.

Two courses were devoted to a study of the elderly. Arizona's "Economics of Aging" used Schulz' The Economics of Aging as a textbook, Syracuse used Developments in Aging: 1981 as a text for a course "Consumer Problems of the Elderly". Both courses focused on economic and financial issues including the aging's impact on the marketplace. Two courses were titled "Consumer Education". The Syracuse course was a "methods" course focusing on consumer topics and materials for elementary, secondary and adult learners. Boyd and Stovall's Handbook of Consumer Education was used as a text and students were required to make community presentations. The course at the University of Guelph in Ontario, Canada, the syllabus for which was specifically requested, is unique and forward-looking. It is built around professionally commissioned case studies and uses Cross's Adults as Learners as a text. The cases to date are set in a secondary school, a consumer information center and a corporation. The course provides an opportunity for students to defend a personal philosophy and study the following in relation to consumer education: philosophies extant today, relevant concepts of learning, current programs and resources, appropriate research, and influential socio-economic changes.

Syracuse's senior seminar "Consumer Studies Issues" is also based on a series of case studies presented in a variety of forms. They are set in the state legislature, in Congress, a corporation, a local consumer affairs office, and a state agency. The remainder of the course is comprised of student presented seminars on current consumer issues.

TABLE 5. Housing Courses, Titles and Textbooks

AZ	Soc/Ec Asp of Hous	Lindamood & Hanna
IL	Prob in Home Man & Hous	Readings
IA St.	Family Environment	Wedin & Nygren
IA St.	Housing Finance	Lindamood & Hanna
IA St.	Housing Alternatives	Davis
KS St.	Housing	Lindamood & Hanna
KS St.	Soc Eff Hous. Envir.	Lindamood & Hanna
MO	Housing the Family	Lindamood & Hanna
OH St.	Hous: Soc/Ec Envir.	Meeks, et al.
OH St.	Hous: Soc/Ec Asp Fam.	Readings
OR St.	Fam Hous & Its Envir.	Lindamood & Hanna
OR St.	Organ Use of House Sp	Readings
OR St.	Financing Housing	Dasso
OR St.	Hous Plan Rel to Funct	Fam. Hous. Hdbk.
OR St.	Hous. Special Needs	Readings
OR St.	Hous Programs/Policies	Readings
UT	Con Aspects of Housing	Meeks

Many traditional courses remain in the syllabi submitted. There is a trend toward the development of courses of an analytical rather than descriptive nature and an increased use of the case study approach.

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AN ANALYSIS OF CONSUMER SCIENCE INTERNSHIPS*

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Raymond E. Forgue, University of Kentucky[2]
John R. Burton, University of Utah[3]

As a follow-up of the Conference on Consumer Sciences in Higher Education, all the participants were surveyed regarding internship/field study experiences. Nineteen persons associated with academic programs which permitted students the opportunity to learn through internship/field experiences completed the survey forms. Although the sample was a convenience group, the responses are illustrative of what some consumer science programs are doing in the area of internship/field study experiences. Questions in three areas were asked: (1) the number of internship/field study students that have been placed in the last three years, (2) successful strategies for finding new placement positions, and (3) descriptions of where students worked as well as the job responsibilities they enjoyed.

NUMBER OF STUDENTS

The median number of total students placed in internship/field study experiences in the last three years through the "consumer science" departments responding was 15 as shown in Table 1. The range was from 1 to 80. Thus, by dividing, 5 is the average number of students per year in internship/field study experiences in the consumer science programs represented in this study.

TABLE 1. Number of Internship/Field Study Students Placed in the Last Three Years

80	13
60	12
50	10
45	8
40	8
30	6
25	5
21	4
18	1
15	

SUCCESSFUL STRATEGIES FOR FINDING NEW PLACEMENT POSITIONS

A total of 27 individual responses were obtained to an open-ended question (multiple responses were permitted) regarding each person's most successful strategies for finding new placement positions for internship/field experiences. Direct contact by faculty members was clearly the most common method used with 21 of the responses indicating that this technique was the most successful. Quotations from selected respondents are illustrative.

"Through networking with consumer agencies and institutions offering consumer education I just call them and ask if they need an intern. Very informal. I have more stations that I have students to fill them."

"After meeting potential sources for internships at luncheons, meetings, etc., I follow-up with a phone call suggesting an internship arrangement. It is important to stress how we can help them rather than asking for their help."

"Finding a particular position for a specific student. I have a student available for a specific internship before asking for the position. Employers can immediately see the quality of the match up."

"Locate hungry individuals or organizations, i.e., those with plenty of work to do but never enough money to do it with: legislators, non-profit organizations."

Five respondents indicated that students themselves developed their own contacts with internship/field experiences. "Many know officials of companies and agencies throughout the state." Students are encouraged to "look for new placements near their 'home' where they can live without paying rent." One person responded that a successful technique is the "information from the National Consumer Affairs Internship Program."

WHERE STUDENTS WORKED AND JOB DESCRIPTIONS

Respondents were asked to report descriptive information regarding each different internship/field experience placement opportunity. Students worked in a tremendous variety of positions as 190 internship/field experience placements were noted by the 19 respondents. Forty-eight or over one-fourth of the positions were listed as "paid" rather than "unpaid" employment.

As could be expected many placements were in the offices of the traditional consumer protection groups: state attorney general, office of consumer affairs, Better Business Bureaus and not-for-profit consumer groups. However, the diversity of positions was remarkable suggesting the breadth of the consumer interest itself.

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[1] Professor of Consumer Studies in the Department of Housing, Interior Design and Resource Management

[2] Assistant Professor, Department of Family Studies

[3] Associate Professor of Consumer Studies

*Presented at the 29th Annual Conference of the American Council on Consumer Interests, Kansas City, Missouri, March 17, 1983.

Subjective analysis of the job descriptions reveals very few students were involved with long-range planning and evaluation (2), travel (2), media contact (4), telephone (7), clerical (9), attending meetings and hearings (9) and writing letters (10). More common but not predominant were such things as complaint handling (18), client services and counseling (18) and consumer education (17). Predominant descriptions included writing (38) and information gathering and research (60).

Listed below are examples of dozens of these jobs grouped according to several broad categories. Duplicates were omitted. Information is provided for each illustrative internship/field experience on the type of firm/company/department where the student worked and on the job description.

Attorney General/State Office of Consumer Affairs

- Consumer Protection Division
  - Consumer complaint and telephone handling special projects, investigations
- Mediation
  - Assist in the mediation of consumer complaints
- Consumer Protection
  - Field investigation, hotline, information gathering for code violations
- Consumer Frauds and Crime
  - Answered hotline, did research for case, wrote a consumer brochure
- Financial Counseling
  - Traveled with counselors and educators
- Consumer Protection
  - Worked on drafts for legislation
- Consumer Protection
  - Wrote letters, research

State/County/City Agency

- County Housing Authority
  - Assist in application procedures, work with clients, prepare packets, office work, research
- City Planning and Development Office
  - Housing rehabilitation program, inspections, office work, cash studies, report writing
- County Assessors Office
  - Accompany appraiser of visits and assist. attend meetings, hearings, etc., office work
- State Department of Justice
  - Writing information brochures and news releases, contacting media with consumer alerts, public information sessions in shopping centers, etc.
- State Department of Justice
  - Mediation of actual consumer business complaints
- Governor
  - Ombudson
- State Commissioner of Insurance
  - Consumer education materials preparation and research
- Regulatory Agency at State Level
  - Research on effectiveness of toll free hotlines
- Regulatory Agency at State Level
  - Developed special brochures
- State Department on Aging
  - Legal aide
- Comprehensive Employment and Training Office (Assessment Division)
  - Counselor; gather information and develop plans; monitor plans, consumer education
- City Consumer Office (various cities)
  - Complaint handling and education
- Comptrollers Office
  - Wrote for newsletter/credit problems, banking
- Committee on Tourism, Licensing
  - Researcher
- County Senior Citizen Center
  - Teaching consumer skills
- County Neighborhood Legal Services
  - Interviewing clients on legal problems associated with the local welfare office. Work on housing code. Work with legal problems of consumers in the community.
- Family and Children's Services
  - Development of training program for financial counselors. Development of resource materials for financial counseling. Financial counseling for clients.
- Neighborhood Health Aid Services
  - Home care service
- State Department of Social Services
  - Answer affirmative action complaints, do legal research. Write draft proposals for the Affirmative Action Council and the Governor's Task Force.
- City Neighborhood Housing Services
  - Survey of community needs; development of Home Sharing alternatives
- City Energy Office
  - Developed resource manual for consumers
- City Utilities Board
  - Cost/Benefit study of home insulation program
- City Housing Rehabilitation Program
  - Financial counseling with clients
- City Poverty Coalition
  - Community outreach and complaint handling
- Neighborhood Housing Service
  - Community-based education program
- State Bureau of Automotive Regulation
  - Helped investigate complaints against auto dealers
- State Financial Institutions Bureau
  - Audit compliance (compliance with credit laws) and standard operating procedures for financial institutions
- State Energy Agency
  - Energy program information - home audits and education
- State Department of Social Services
  - Work with families needing financial assistance

State Legislature

- State Legislature
  - Answered constituent letters, wrote policy papers, answered phone, attended legislative session
- State Legislature
  - Work with and represented legislator in well-rounded experience from bill drafting to media contact.
- State Representative
  - Assistance to legislative aids
- State Assembly Intern Program
  - Aide to assembly (wo)man. Answering constituents' questions, researching legislative proposals, particularly in child care. Research on pay equity for women.
- State House of Representatives
  - Communication with constituents. Research on legislation

Federal Government Offices in Local Community

- Farmers Home Administration
  - Worked as a trainee, learned procedures
- Housing and Urban Development Office
  - Gather data on former projects, office and filing work, update project directory, maps
- Housing and Urban Development Office
  - Assist staff, learn about grant programs, attend meetings, write reports
- Army Community Services
  - Financial counselor
- Social Security
  - Observer's aid, data analysis, receptionist
- Area Energy Office
  - Public relations and research

Not-For-Profit Consumer Groups

- Consumer Credit Counseling Service
  - Office work, telephone requests, observe counseling
- Community Services Consortium
  - Explain self-help housing and set up programs on FmHA, experience with grant writing

Community Service Agency
Writing energy conservation information booklet, housing counseling program sponsored by HUD

Center for Public Representation
Newsletter, major research project on attitudes of public members of regulatory boards in the state

Consumer Budget Counseling Service
One-on-one counseling

Credit Union National Association
Public relations and marketing projects, consumer education

Concerned Consumers League
Consumer representation, consumer education, consumer information

League Against Child Abuse
Attended professional meetings, attended senate hearings, general office work, restructured materials library

Northeast Solar Energy Center
Develop a resource file for inclusion in handbook on warranties and energy saving claims

Financial Planning Firm
Counselor-in-training; filed forms

Financial Planning Firm
Research associate; computer work

Credit Counseling Service
Gathered information, filed reports, taught classes

Financial Crisis Clinic
Counselor-in-training

Consumers Union
Assistant to the director

Campers Consumer Sciences Office
Community agency liaison

Common Cause
Researcher

Center for Study of Responsive Law
Research

Consumer Credit Counseling Service
Assist in developing resource materials for clients in financial management. Provide financial management.

Community Action Committee
Consumer education programs

Cooperative Extension

County Extension Office
Special projects related to energy conservation and window treatments

Cooperative Extension Service
Assist in the planning, development, and implementation of programs

Cooperative Extension Service
Product booklet outlining services for displaced homemakers

Cooperative Extension Service
Field work in community

Cooperative Extension Service
Developed programs and materials under direction of state extension specialist

Federal Government in Washington

Capitol Hill Improvement Corporation
Housing rehabilitation agency. Coordinate pilot project on neighborhood rehabilitation.

USDA Food and Nutrition Service
Policy planning and evaluation. WIC research study. Food stamp policy issue analysis

Federal Trade Commission, Division of Marketing Abuses
Role of FTC in consumer protection policies

Office of United States Senator
Investigating consumer policy issues and delays in passage of consumer protection laws

Federal Agency
Helped with seminars and community activities; wrote articles

Federal Agency
Writing educational materials; writing summaries of testimony

Executive Branch Office
Handled written correspondence, complaints and research

Better Business Bureau

Better Business Bureau
Mediated complaints; answered company reputation inquiries; and monitored advertising

Better Business Bureau
Helped resolve complaints. Investigated possible decpetion

Better Business Bureau
Ran the local advertising substantiation program

Better Business Bureau
Mediated complaints; worked on General Motors (GM) arbitration program

Radio and Television

Television
Processing complaints

Radio Hotline
Investigate complaints. Refer to appropriate assistance

Television
Investigate complaints

Radio
Study possibility of consumer-oriented programming

Radio
Complaint coordination and follow-up

Television
Consumer Beat report

Banking

Federal Savings and Loan
Office procedures, collection experience, real estate loan procedures

Bank
Loan applicant interviewing, compile credit information, prepare documents, file maintenance

Bank
Learn techniques of real estate loan processing, assist staff members

Bank
Learned use of telephone and computer information system, answered consumer questions, observed in departments, gave a seminar on credit legislation, answered letters

Bank
Educational/informational efforts for credit cards

Savings Bank
Marketing research on use of services offered

Credit Union
Consumer education and marketing

Utilities

Telephone Company
Long range planning and analysis, consumer response to corporate affairs; advisor to top management

Gas
Researched answers to consumer questions, wrote a radio program, wrote a flier and fact book, observed in a number of departments and worked on a newsletter

Telephone Company
Developed list of consumer related offices in state, clipped newspapers, observed in many sections, wrote cover letter, ran errands, worked on Disaster Alert, studied literature on rate case, attended Senate hearings on communications bill

Large Telephone Company
Conduct survey of consumer wants/needs. Develop community representative program to provide consumer complaint services. Coordinate company support for local charities and cultural activities.

State Light & Power
Services to elderly consumers

Hospitals

Hospital
Developed a flier for the Arthritis Services program, developed a survey and tabulated it later, attended many meetings, worked on National Hospital Week Committee

Hospital
Work with staff serving as patient ombudsman

Other Businesses

Title Company
Poster/locator, recorder, title examiner, escrow work for professionals in the agency

Oil Company
Special projects as designed by staff, orientation to company, planned seminars, attend conference and worked on reports, flyers, public relations

Local Food Manufacturers
Demonstrations of food products; researched new uses of products

Large Retail Company
Consumer education materials development, conference planning

Worlds of Fun
Consumer relations officer

State Dairy Council
Wrote scripts, attended presentations, scheduled meetings, answered letters

Large Food Store
Developed a bike safety seminar in cooperation with the police in three cities

Large Grocery Store
Conducted groups of school children through their warehouse and store, wrote a survey for use in stores, worked on an annual meeting for a consumer organization, observed shoppers

Large Grocery Store
Conducted consumer surveys, researched and wrote articles

Large Retailer
Answered phone, wrote educational materials, visited many departments, answered consumer questions

Large Consumer Goods Firm
Marketing research-recall evaluation. Development of responses to consumer complaint letters. Research on major areas of complaint. Research on consumer satisfaction with particular products.

Information Exchange Organization
Research and writing of articles

Large Credit Card Company
Problems of consumers in dealing with large corporations. Creat information brochures for consumers

Major Manufacturing Concern
Development of estimates of cost of living useful in reassignment of middle management

Appliance Manufacturer
Product testing and evaluation

Food Manufacturer
Product testing, writing of materials

Encyclopedia Company
Analysis of consumer complaint handling

Risk Insurance Company
Research on complaint handling

Life Insurance Company
Worked in marketing and sales training (not direct sales)

Other

Joint Council on Economic Education
Write news releases, update pamphlets, maintain library

American Council on Consumer Interests
General assistance

State Council on Economic Education
Attended training conference, reviewed films, researched and wrote a position paper, tabulated response to a questionnaire, attended a market fair

School District (5th grade)
Teaching consumer skills

United Auto Workers (Local Office)
Prepare a syndicated column on labor issues. Relationship of unions and OSHA right-to-know regulations.

University Bookstore
Survey of student satisfaction with bookstore

University Ombudsman's Office
Study of user satisfaction

World's Fair
With post-fair use study groups

University Office of Foreign Students
Evaluation of programs to help foreign students

IMPLICATIONS

We hope that the breadth of internship/field experiences in consumer sciences in higher education reported will serve to motivate others. Professors and students might now have a broader view of what types of consumer related internship/field experience opportunities exist in addition to the variety of actual on-the-job responsibilities that are possible.

CONSUMER SCIENCE IN INSTITUTIONS OF HIGHER EDUCATION: SOME FINDINGS FROM THE NATIONAL STUDY[1]

Ronald W. Stampfl, University of Wisconsin[2]

INTRODUCTION

The tables of this article summarize only some of the findings of a national study (funded by U.S. Office of Consumers' Education) designed to

- develop a list of existing consumer science[3] programs in institutions of higher education, representing the range of disciplines and colleges consistent with actual practice.
- to profile the existing degree programs by credit.
- to study, in substantial depth, 27 programs thought to represent the broad range of programs discovered. Such matters as program goals, scope, governance procedures, administrative structure, curricula, faculty composition and interests, enrollment, student placement, source of funding, etc. were studied utilizing a detailed 18 page response form.

The Study

An attempt was made to completely define the universe of four year universities in the U.S.A. (one in Canada) that offer undergraduate programs in the consumer area, by whatever name. The following procedure was utilized to develop a mailing list.

- contact all programs listed in the CERN/directory.
- check all library directories and catalogues for programs not listed in CERN/Nolf directory. [3]
- place notice of study in ACCI newsletter, calling for all interested individuals to contact the author.
- check John Burton et. al [1] study for any programs not otherwise identified.
- review ACCI membership list for potential schools.
- use opinionaire data from Rosella Bannister's initial contacts of people in the field (requesting listing of programs) to identify programs.
- review Hayden Green's doctoral research for usable programs. [2]
- request each respondent who completed the degree profile sheets to identify other programs in their own state (and nationally). Cross-check.

It is thought that the above procedure resulted in as complete a listing of existing programs as was possible to obtain.

Findings

The National Study document [4] contains approximately 582 pages of data, in sixteen sections. Although it presents the complete findings of this research effort, selected summary tables are provided herein which capsulize some of the information now available. To maximize the amount of data to be reported in the space available, each table is labeled and presented without comment.

In addition to data summarized in this paper and available in greater detail, other data in the research base, for 27 university consumer programs studied in depth, includes:

- Respondent definitions of these terms: consumer economics, family economics, consumer science(s), consumer studies, consumer affairs, minimum characteristics of a "university consumer program."
- Courses offered — on each campus, level, credits, catalog description, text used.
- Program emphasis, undergraduate and graduate, by micro/macro, basic/applied and public/private dimensions proposed by Kroll/Hunt, JCA, Winter 1980.
- Career Competencies — each respondent's listing of career competencies developed in their program, ranked as "crucial" "important" or "supportive" for professional success.
- Each respondent's opinion on "what must be done in the next five years by the consumer field at large to increase employability of our students."
- Single page profiles for graduate programs (MS, MA, or Ph.D.) where offered on respondent campuses.
- Individual faculty profiles, by degree/field/university, by rank/tenure, by % time on staff, by courses taught.
- Aggregate faculty research profiles (no names), including nature of publications in consumer field.
- Review procedures in place on each campus to assess effectiveness in teaching, research service and student placement.
- Respondent short essays on their personal conceptualization of what should and should not be included in the intellectual scope of the field.
- Respondent short essays on the perception of the ideal relationship between home economics and consumer science, in content and administrative structure.
- Mission statements from each of 27 programs.
- Actual jobs accepted by graduates of 27 programs in last five years.

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3. Nolf, Nancy (CERN), Selected Consumer Studies Degree Programs in United States Colleges and Universities, Consumer Education Resource Network, Rosslyn, Virginia. 1981.

4. Stampfl, Ronald W. Consumer Science in Institutions of Higher Education: The National Study, Office of Consumer Education, U.S. Department of Education, Washington D.C. (Contains raw data from 27 programs studied "in-depth".), 1983.

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[1] Funded, under contract, by U.S. Office of Consumers' Education

[2] Professor, Consumer Science and Business

[3] The term "consumer science" is used generically.

Table 1. Four Year Colleges and Universities Submitting Undergraduate Program Analysis Sheets (* indicates submission of In-depth Program Audit)

	Also listed in CERN/Nolf Directory
Auburn University-AL	yes
Brooklyn College-CUNY	yes
California Poly. State University-San Luis Obispo	no
Central Michigan University	yes
*Colorado State University	yes
*Cornell University-NY	yes
Eastern Michigan State University	yes
Florida State University	no
Hood College-MD	yes
*Howard University-District of Col.	yes
Illinois State University	yes
Indiana University of Pennsylvania	no
*Iowa State University	yes
*Kansas State University	yes
Louisiana Tech. University	yes
Miami University-OH	yes
*Michigan State University	yes
Montana State University	yes
Murray State University-KY	no
North Texas State University	no
Northwest Missouri State University	no
*(The) Ohio State University	yes
*Oklahoma State University	yes
*Oregon State University	yes
*Purdue University	yes
San Diego State University	yes
Southern Illinois University	yes
*Syracuse University-NY	yes
*Texas Woman's University	yes
*University of Alabama	yes
*University of Arizona	no
*University of California-Davis	yes
University of Connecticut	yes
University of Delaware	yes
*University of Guelph	no
*University of Houston	yes
*University of Illinois (U-C Campus)	no
*University of Kentucky	yes
University of Maine at Farmington	no
University of Maryland-Family and Community Development	yes
*University of Maryland-Textiles and Consumer Economics	yes
*University of Minnesota	no
*University of Missouri-Columbia	yes
University of Nebraska-Lincoln	yes
University of New Hampshire	yes
University of Rhode Island	yes
*University of Tennessee (no undergrad program)	yes
*University of Utah	yes
*University of Vermont	yes
*University of Wisconsin-Madison	yes
University of Wisconsin-Stout	no
*Virginia Polytechnic Institute and State University	yes

Table 2. Four Year Colleges and Universities Contacted and Responding as Having No Undergraduate Programs

	Also listed in CERN/Nolf Directory
Alcorn State University-Lorman Mississippi	no
Andrews University-MI	yes
Benedictine College-KS	no
Brighton Young-Provo-UT	yes
California State Polytechnic University-Pomona	yes
California State University-Sacramento	yes
Carson-Newman College-TN	no
Central Washington University	no
College of Saint Scholastica-MN	no
Daytona Beach Community College	no
Delta State College-Mississippi	yes
Drexel University-PA	no
Eastern Kentucky University	no
Edgecliff College of Xavier Univ.-OH	no
Freed Hardeman College-TN	no
Geneva College-PA	no
Humboldt State College-CA	no
Indiana State University	yes
Kent State University-OH	no
Kentucky State University	no
Los Angeles City College	no
Madonna College-MI	no
Mankato State University-MN	no
Mary Wood College-PA	no
Mississippi College	no
Mount Marty College-SD	no
Mount Mary College-WI	no
Northern Illinois University	no
Ohio University	yes
Peay State University-TN	no
Peru State College-NE	no
Pittsburg State University-KS	yes
Rosary College-IL	no
Saint Tereasa College-MN	no
Samford University-AL	no
School of Ozarks-MO	no
Shepherd College-WV	no
South Carolina State College	no
Southwestern College-KS	no
Stephen F. Austin State Univ.-TX	no
Tennessee Tech. University	no
Texas A & M University	no
University of Mary Hardon-Baylor-TX	no
University of Nebraska	yes
University of Nevada	no
University of North Carolina	yes
University of Southwestern Louisiana	no
University of Tennessee	yes
University of Texas-Austin	no
University of Wisconsin-Milwaukee	no
Western Carolina University-NC	no
West Virginia State College	yes
West Virginia University	no
Winthrop College-SC	yes
Xavier University-OH	no

Table 3. Unsuccessful Contacts

Four Year Colleges and Universities Contacted But Not Responding (as of March 3, 1983)	Times Contacted	Also Listed in CERN/Nolf Directory
Adrian College-MI	2	no
Butler University-IN	2	no
California State Univ.-Chico	2	no
California State Univ.-Fresno	3	yes
Emporia State University-KS	2	no
Florida International Univ.	2	yes
Fort Hays State University-KS	1	no
Georgia College	3	yes
Georgia Southern College	2	yes
Idaho State University	3	yes
Indiana State University	2	yes
Lamar University-TX	2	no
Lehman College-NY	2	yes
Loma Linda University-CA	2	no
Mansfield State College-PA	2	yes
Marian College-IN	2	no
Mercy College-MI	2	yes
Mercyhurst College-PA	2	no
Mississippi State University	2	yes
Norfolk State University-VA	2	yes
North Dakota State University	2	yes
Northeast Missouri State Univ.	3	yes
Northern Arizona University	2	no
Olivet Nazarene College-IL	2	no
Saint Catherine College-MN	2	no
Saint Joseph College-CT	2	no
Saint Vincent College-PA	2	no
Sam Houston State	2	no
San Francisco State University	2	yes
Santa Ana College-CA	3	no
Seton Hill-PA	2	yes
Shelby State Comm. College-TN	3	no
Southwest Missouri State	2	no
State University of NY-Onionta	2	yes
Texas Tech University	2	no
University of Georgia	2	yes
University of Massachusetts	2	yes
University of Rhode Island	3	no
University of Santa Clara-CA	1	no
University of Wyoming	2	yes
Utah State University	3	yes
Valpariso University-IN	2	no
Washington State University	2	yes
Wayne State-MN	2	no
Weber State College-UT	3	no
West Virginia Wesleyan College	2	no
Whittier College-CA	2	no
California State University-Northridge[a]	2	yes
Northern Colorado University[a]	2	no
Rutgers State University-NJ[a]	2	no
Bowling Green State Univ.-KY[b]	1	no
Mount Saint Mary College-CA[b]	1	no
State University College at Buffalo-NY[b]	1	yes
University of NC-Chapel Hill[b]	1	no

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[a] Responded as "choosing not to participate"

[b] Mailings returned as undeliverable

Table 4. Summary Profile of the 51 Undergraduate Consumer Programs Identified in Table 1

Public vs. Private Funding
46 Public 5 Private

Full-Time Equivalent Faculty
281.7 Number of FTE's*
23.5 to 1.0 Range of FTE/s per campus*
6 Number of Schools not responding to FTE question

Credits Required for 4 year undergraduate Degree
120 to 205 (semester and quarter basis)

Enrollment
4083 total number of majors enrolled in Fall, 1982*
81 mean number of "majors" at 50 schools*

Graduate Program Availability
45 Number of Universities with MS or MA programs available
20 Number of Universities with Ph.D. programs available

Sex of Student (Undergraduate Majors)
88% Female
12% Male

Mean Gradepoint Entrance Requirement
2.23/4.0 Minimum required for entrance to undergraduate program (based upon 16 responses, N=27 full program audit sample only)

Name Given to Consumer Majors**

3	Consumer Science(3)
10	Consumer Studies
5	Home Economics
9	Consumer Affairs
9	Consumer Economics and/or Family Economics
4	Housing
11	Combination of two or more above
6	Other title

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*Includes California Poly. State-San Luis Obispo. Respondent cited 23.5 FTE's and 1076 majors.

**Does not total to 50 since several schools have more than one major in consumer field profiled. Also, some schools profiled more than one major on the same sheet when similar. Some schools reported Retailing majors as part of consumer science—these were excluded for ease of analysis.

Table 5. Titles of "Absolutely Required" Consumer Courses* (offered in the Department or School of the Respondent)

Advanced Management
Advanced Personal and Family Finance
Allocation of Family Resources
Analysis of Family and Community Resources
Communication in the Market Place
Community Agencies
Community Services and Welfare of Families
Consumer Analysis of Fashion
Consumer and the Law
Consumer and the Market
Consumer and Society
Consumer Aspects of Health Insurance
Consimer Aspects of Life Insurance
Consumer Assistance
Consumer Behavior
Consumer Behavior in an Ecological Context
Consumer Buyer Science
Consumer Choice
Consumer Competence in a Complex Society
Consumer Credit
Consumer Decision Making
Consumer Economic Problems
Consumer Economics
Consumer Education
Consumer/Family Economic Issues and Public Policy
Consumer Finance
Consumer Investment and Savings Decisions
Consumer Issues and the Market
Consumer Laws and Regulations
Consumer Legislation
Consumer Market Strategies
Consumer Motivation and Behavior
Consumer Problems of Elderly
Consumer Protection
Consumer Psychology
Consumer Relations
Consumer Resource Management
Consumer Resources
Consumer Textiles
Consumer Textiles and Clothing
Consumers Role in Family
Consumption Economics
Consumption Theory
Current Consumer Issues
Demonstration Techniques
Econometrics
Economic Organization of the Household
Economics of Aging
Economics of Consumer Policy
Economics of Consumption
Education for Consumers
Energy Perspectives
Energy Utilization of the Household
Equipment and the Consumer
Family Analysis and Planned Change
Family as an Economic Unit
Family Decision Making
Family Economics
Family Finance (Personal)
Family Financial Analysis
Family Financial Management
Family Management Applications
Family Management Theory
Family Resource Management (residence)
Family Resources: Financial Management
Family Resources: Time and Human Energy
Family Values and Resource Management
Families as Consumers
Families in the American Economy
Financial Counseling
Financial Planning
Financial Problems of Families
Food and the Consumer
Fundamentals of Housing Economics
Home Equipment I
Home Equipment: Consumer Electronics
Home Management Practicum
Housing
Housing and Society
Housing Policy and Housing Programs
Housing Selection
Income and Wealth
Introduction to Consumer Affairs
Introduction to Consumer Interests
Introduction to Consumer Studies
Introduction to Design
Legal Aspects of the Family
Macroeconomic Theory
Management for Low-income Families
Marketing and the Consumer
Microeconomic Theory
Personal and Family Management
Practicum: Textiles
Principles of Selling
Problems in Consumer Economics
Research Methods
Selected Topics in Consumer Studies
Seminar: Consumer Affairs
Seminar: Family Management
Seminar and Research in Consumer Studies
Senior Thesis
Social and Psy. Aspects of Consumer Behavior
Sociological Aspects of the Housing Environment
Special Topics in Consumer Education
State/Local Consumer Protection
Textiles and Clothing Systems
The Family Economy
The House
Women in the Economy
Work Analysis and Area Planning
You and the Consumer

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*Absolutely Required Course - any single course every student obtaining the audited degree must normally have before graduation.

*Consumer Courses - any course offered by faculty in the least aggregated administrative unit in which respondent is a voting member - typically a department but not a school. Alternatively, any course presented from the consumer perspective and/or intended to provide learning opportunities directly related to understanding any matter affecting consumer well-being.

Table 6. Titles of "Choose From Required"* Consumer Courses (offered in the Respondent's Department or School)

Advanced Home Management
Advanced Personal and Family Finance
Advertising and the Age of Mass Consumption
Advocacy
Analysis of Spending Patterns
Apparel Analysis I & II
Clothing Construction
Community Services and Welfare of Families
Concepts of Decision Making in Mgnt. for Fam. Liv.
Consumer and the Environment
Consumer and the Fashion Marketplace
Consumer and the Law
Consumer Aspects of Housing
Consumer Behavior
Consumer Credit
Consumer Credit Finance
Consumer Decision Making
Consumer Economics
Consumer Finance
Consumer Household Appliance Alternatives
Consumer Housing Alternatives
Consumer Information
Consumer Issues
Consumer Law and Advertising and Solicitation
Consumer Legislation
Consumer Marketing Program and Policies
Consumer Materials
Consumer Policy Analysis
Consumer Problems
Consumer Product Safety
Consumer Program and Policies
Consumer Protection
Consumer Relations Practicum
Consumer Resource Management
Consumer Socialization
Consumer Technology: Product Standards
Consumers in Society
Consumerism and Controversy
Culture Society and Dress
Decision Making for the Consumer
Demonstration Techniques
Design Processes
Development and Function of Family Housing
Durable Goods
Economic Status of Women
Economics of Food Consumption
Economics of Poverty
Elderly Consumer
Family Economics
Family Economics and Management Issues
Family Energy Consumption
Family Housing Issues
Family Law
Family Resource Management
Family Resource Management Lab
Families, Communities and the Ecosystem
Families, Legislation and Public Policy
Field Instruction in Family Economics Management
Finance and Economics
Financial Responsibilities of the Family
Food Awareness
Food I & II
Food Laws and Regulations
Home Interiors I
Home Management Experimental Lab
Household Equipment
Household and Local Government
Household Management
Housing
Housing and Design
Housing Conservation
Housing Finance Decisions
Housing for Special Needs
Housing Policies and Programs
Housing Requirements of Families
Human and Consumer Advocacy
Human Service Systems
Individual and Family Management
Internship in Human Development and Cons. Science
Introduction to Interior Design
Investments Analysis
Management for Families with Limited Resources
Management Theory
Meal Management
Microcomputers in Home Management
Microwave Cooking Technology
Nutrition
Policy Analysis
Poverty and Affluence
Practicum in Consumer Action
Practicum in Consumer Studies
Principles of Food Preparation
Problems in Family, Consumer & Consumption Econs.
Problems in Family Finance
Product Liability and Governmental Regulations
Program Budgeting
Resource Management
Resource Materials for Consumer Education
Seminar in Home Management Theory
Senior Honors Thesis
Social Effects of the Housing Environment
Special Topics in Consumer Science
Study Tour
Textile Analysis
Textile Products for Apparel and Home Furnishings
Textile Structure and Design
Textiles for Consumers
The Contemporary Retail Community
The Disabled Person in Family and Community
Utilization of Community Consumer Resources
Visual Merchandising

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*"Choose From Required Course" - any single course that is part of a list of single courses, some of which must be taken to satisfy a categorical degree requirement but none of which is absolutely required. (Typically important enough to be listed in published material by course title, as opposed to "concentration" defined in Table 9.)

Table 7. Titles of "Absolutely Required" Interdisciplinary Courses, (offered outside Respondent's School) (Each mentioned one or more times)

Abnormal Psychology
Administrative Regulation of Business
Advertising
Animals, Food, and Man
Architecture and Landscape Architecture
Basic Counseling Skills
Basic Reporting
Business Communications
Business Fundamentals
Business Law
Community Economics
Community & Resource Development
Computer Science
Consumer Behavior
Consumer Health
Consumer Law
Consumer Psychology
Current Economic Issues
Economic Analysis
Economic Statistics
Economics I
Economics of Money, Credit and Banking
Economics of Public Policy: Antitrust Economics
Estate Planning
Finance
Food and Nutrition
Health Education
Human Development
Intermediate Price Theory
Interpersonal Communication
Introduction to Advertising
Introduction to Broadcast Operations
Introduction to World of Business
Legal Environment of Business
Management Information Systems
Marketing Management
Marketing Principles and Organization
Marketing and Society
Mass Communications, Mass Media and Advertising
Mass Media Technology
Materials for Construction
Money and Banking
National Income Analysis
Personal Finance
Personnel Behavior
Physics: Choices of Energy
Political Science
Preparation & Production of Instructional Materials
Prices and Resource Allocation
Principles of Accounting
Principles of Economics
Principles of Management
Principles of Marketing
Principles of Persuasion
Private Enterprise and Public Policy
Public Communications
Public Relations
Public Speaking
Publicity and Public Relations
Radio, T.V. and Film
Skills
Social Environment of Business
Social Psychology
Social Welfare
Society and Government
Statistics
Theory of the Firm

Table 8. Titles of "Choose From Required" Interdisciplinary Courses (offered outside of the Respondent's School) (Each mentioned one or more times)

Accounting
Advertising
Assertiveness Training
Basic Photography
Business Communications
Business and Interpersonal Communication
Business Law
Buyer Behavior
Communications
Consumer Aspects of Food Science
Consumer Behavior
Consumer Protection Law
Consumer Psychology
Contemporary Problems & Ways of Knowing
Dynamics of Social Interaction
Economics Analysis
Economic and Political Systems
Editing Procedures
Ethical Issues
Evolution of Food and Drug Controls
Financial Institutions and Markets
Food Sanitation and Quality
General Computer Science
Graphic Arts, Graphic Communication
Group Dynamics
Health Care Systems
Human Resource Management
Interpersonal Communication and Self-Awareness
Introduction to Mass Media
Introduction to Organizational Behavior
Legal Environment
Legal Environment of Business
Legislative Processes
Macro Economics
Marketing, Marketing Management
Marketing Research
Mass Media and the Consumer
Micro Economics
Money, Credit and Banking
National Issues
Nutrition and Society, Nutrition Today
Oral Communications
Personnel Management
Persuasive Communication
Political Science
Principles of Finance
Principles of Management
Principles and Practices of Real Estate
Principles of Selling
Product Liability
Public Policy
Quantitative Methods
Radio Production
Real Estate, Real Estate Financing
Reporting I, Report Writing
Retail Merchandising
Risk and Insurance
Small Group and Family Interaction
Sociology, Social Philosophy
Social Psychology
Societal Context of Consumer Education
Statistics and Methodology
Technical Writing
Textiles and Clothing for Consumers
T.V. Production
Writing for Public Relations
Written Communications

Table 9. Interdisciplinary Concentrations (10 credits or more) in Undergraduate Consumer Degree Programs *

Accounting
Adult and Extension Education
Advertising
Aging
Agricultural Economics
American Studies
Art
Business
Business Law
Child and Family Studies
Communication
Computer Science
Consumer Economics
Consumer Education
Design, Construction and Systems
Distribution
Economic Analysis Group
Economics
Economics of Poverty
Educational Psychology
English Composition
Environmental Studies
Extension and Adult Education
Family Relations
Family Social Sciences
Finance
Financial Counseling
Foods and Nutrition
General Home Economics
Home Economics Communications
Household Equipment
Housing
Human Development
Human Services
Interior Design
Journalism
Management
Managerial Economics
Marketing
Merchandising
Money and Banking
News Writing and Reporting
Nutrition
Political Science
Pre-law
Psychology
Public Finance
Public Speaking
Quantitative Methods Group
Research, Evaluation and Program Development
Retailing
Risk and Insurance
Rural Sociology
Social Psychology
Social Work
Sociology
Telecommunications
Textiles
Urban Sociology
Urban Studies
Vocational Education
Women's Studies

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*Interdisciplinary Concentration-involves 10 or more credits in an academic area of study, outside the consumer area. Similar to a minor. Typically identified in published material by discipline area, with specific permitted courses obtained from an advisor or approved list. Usually related to a "major" offered in another unit of the university.

Table 10. "Absolutely Required" Courses in Undergraduate Consumer Programs: The "BASICS"*

General Courses

28	Algebra and Trigonometry
5	Calculus
15	Chemistry
42	Communications Arts or Speech
15	Computer Science
29	Economics
56	English-Composition
19	English-Literature
7	Journalism or Mass Communication
26	Natural Science (not Chemistry)
25	Political Science
44	Psychology
42	Sociology
23	Statistics
26	Other Humanities

Home Economics Courses

32	"All School" or Integrative
26	Textiles and Clothing
40	Family Courses (NOT Family Economics)
18	Child-Related Courses
39	Food and Nutrition
18	Related Art and Design
26	Home Management Courses (not listed in consumer course section)
29	Housing Courses (not listed in consumer course section)
10	Home Economics Education
3	Home Economics Journalism

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*Read: "of 61 distinct programs at 50 schools responding, 28 programs require the undergraduate student to take one or more courses in Algebra and Trigonometry."

NOTE: A copy of the 582 page National Study is being made for each of the 27 in-depth program auditors, as starred in Table 1. Funding does not permit wider distribution at this time but some "personal lending" is encouraged to facilitate dissemination and use of the data. Xeroxing encouraged—this is public information. Analysis and publication from the data base is encouraged upon contacting author of this article.

Table 11. Summary of Responses from 27 Program Auditors to: "List...job titles faculty in your department consider 'appropriate targets' for (your) graduates."*

Actuary
Account Representative-Stock brokerage firm
Advertising Account Executive
Advertising-Copywriter
Applied Demand Analyst
Assistant Buyer-department or chain store
Builder
Business Management
Buyer for department store
Claim Adjuster (Insurance)
Claim Representative with Social Security
Community College Instructor
Community Organizer
Consultant to Business on the Consumer Interest
Consumer Advocate
Consumer Affairs-Director or Specialist
Consumer Arbitration Coordinator
Consumer Complaint Mediator or Specialist
Consumer Credit Counselor
Consumer Educator
Consumer Hotline for TV and radio
Consumer Journalist
Consumer Lobbyist
Consumer Newswriter
Consumer Ombudsman
Consumer Product Representative
Consumer Promotion Manager
Consumer Protection-Specialist or Investigator (with aging agencies, attorney general offices, news organizations, business, Better Business Bureau)
Consumer Researcher
Consumer Service-Banks
Consumer Writer
Consumption Economist
Credit Analyst
Credit Card Operations Manager
Credit Union Manager
Customer Service Representative
Debt Counselor
Demonstrators of New Products
Department Store Sales-Housewares
Developer of Training Programs
Director of Consumer Affairs
Energy Auditor-Utility Company
Energy Conservation Advisor
Equipment Demonstrator
Executive Trainee for retail firm
Executive in Training and Development
Extension Agent or Extension Home Economist
Extension Specialist-Consumer Affairs
Extension Specialist-Family Resource Management
Family Economist
Family Financial Planner
Family Resource Management Specialist
Financial Counselor or Advisor or Planner
Food Technologist
4-H Agent
Health Care Manager
Home Economics Teacher
Home Economist
Home Economist-Consumer Information
Home Economist-Engineering
Home Economist for Public Utility
Housing Consultant-Government
Housing Counselor
Housing Design, Remodeling
Human Services Specialist
Information and Referral Coordinator
Information Specialist
Insurance Agent
Investigator for Attorney General Office (State)
Job Analyst
Legal Aide
Legislative Assistant or Aide
Legislative Researcher
Loan Officer or Counselor-Bank
Lobbyist
Management-Public Utility
Management Trainee-Banks
Management Trainee-Major Corporation
Marketing Executive
Market Researcher
Media Researcher
Merchandiser/Designer
Merchandising
Quality Assurance Supervisor
Paralegal Assistant for Law firm
Peace Corp
Personal Banker
Personnel Specialist or Manager
Policy Research Associate-State and Federal Govt.
Pre-law preparation
Product Development Technician
Product Information Representative
Product Manager
Product Testing
Professor
Promotional Materials Demonstrator
Public Information Officer
Public Policy Analyst
Public Relations Specialist
Purchasing Agent
Real Estate Broker
Recruitment Administrator
Research Home Economist
Residential Consumer Advisor
Sales Representative
Securities Analyst
Social Service Agency Caseworker
Statistics Analyst
Store Manager
Teacher
Technical Editor
Travel Agent
Underwriter (Insurance)
VISTA
Weights and Measures Investigator

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* Note: This is a comprehensive compilation of responses. Some duplication is recognized as a variety of titles may correspond to a single job.

Table 12. Selected Statements from Respondents Regarding Problems Facing the Consumer Field in Institutions of Higher Education in the 1980's*

- Articulation of what the consumer field is.
- Improved recognition for the field's legitimacy.
- Reconciling the specialist vs. generalist perspectives within single programs.
- Expansion of research base for cohesive content and methodology.
- Incorporating quantitative methods, mathematics and computer technology into the field.
- The present redirection in the job market and student preference toward business orientation which dilutes the consumer focus.
- Employment opportunities for graduates.
- Additional instructors with graduate degrees in the consumer field, instead of related areas.
- Limited number of textbooks available.
- Insufficient funds (and classrooms) to maintain momentum of emerging field.
- Development of an integrated and synthesized set of theories that serve our needs.
- The shift in higher education to occupational and vocational education has created a feeling among students that "nothing is worth studying unless it is job oriented". Emphasis on the role of the individual and means for enhancing consumer sovereignty is not in the mainstream of student's concepts of higher education.
- The absence of a professional standard of competence and identification creates a problem for graduates. The consumer field for which they are trained remains obscure.
- Consumer science is vulnerable to absorption from other (more aggressive) areas since almost all areas can claim a consumer orientation.
- Fear on the part of administrators and teaching faculty to recrimination from representatives of the Business Roundtable and similar "free enterprise" fronts curbs the consumer scientist from taking consumer positions on such matters as funerals, term insurance, corporate mergers, utility rates, consumer credit, etc.
- It is difficult for all "consumer" programs to attract and hold qualified faculty.
- Quality of research — often our research is superficial and is not on the cutting edge.
- Confusion with General Home Economics — too many schools call these general home economics, consumer services or some similar title. This undermines the credibility of all programs. Institutions doing this must begin to recognize that these are very different areas.
- Providing opportunities for faculty to develop and maintain professional contacts important to the field. Study leaves, faculty internships, reduced teaching loads, and other means of support for professional development are crucial.
- Limited number of Ph.D.'s who have educational background and experience in the Consumer Affairs/science field. This results in weak curriculums, poor advising and unrealistic expectations. . .
- Parochialism of some faculty who refuse to update courses and curriculums to meet changing needs.
- Getting realistic information on careers out to prospective students.
- Defining the field and coming up with some core competencies; definitions; modern courses and programs; internship and placement promotion; and defining consumer issues as separate from "family" issues.
- Improve the analytical and quantitative skills of undergraduate and graduate students, respectively.
- Information overload . . . The field is so broad. . . An emphasis on process rather than content is almost essential. . .
- Recruitment of students does not take place from among students interested in the contributing disciplines, i.e., economics, political science, sociology, but rather only from the subset that elects home economics or human development. This tends to screen out students interested in the public and macro domains.
- More consumer study institutions need to see themselves as supports to other occupations and programs and not as a separate entity that needs only themselves or (are) in constant competition with all other groups.
- Academic politics . . . idealogical conflicts. Agricultural colleges . . . may not want to support research hostile to the agricultural community. Education schools may feel a need to emphasize consumer education, even if there is no evidence of effectiveness. Home economics schools may feel threatened by outsiders who do not share their traditions. For all schools, a desire to place students with business may affect the independence of the research.
- It is possible that some programs may become fragmented and lose their unifying sense of purpose and thrust, by pulling together a diverse group of specialists whose primary orientation and commitment relates to their several basic disciplines and their individual career advancement . . .
- Critical Mass — in most cases, there are only a very few scholars working in consumer science in any one institution. This limits interchange and makes it more difficult to offer the range of courses necessary. It also limits leverage and visibility within the university.
- Consumer science is often perceived of as a program in buymanship and budgeting and/or advocacy of the Ralph Nader type.
- Difficulty in attracting outstanding candidates for faculty positions . . . (one aspect of this) is that one of the main "feeders". Home Economics, demands so much breadth of degree candidates that depth tends to be sacrificed.
- Obtain further understanding and support from the business community. . . We need to encourage more conservatives to adopt consumer science as a home discipline.
- Stretching the imaginations of those running consumer studies programs as to the diversity of employment opportunities that exist for graduates.
- How to balance the need for substantive research contributions by consumer scientists with the need to develop consumer science organizations and activities. The problem here is that professional organizations can tend to generate too much concern with analysis of the profession and detract from scientific advancement by the individual scholars that constitute the profession.

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* Items in this table are generally direct quotations, although selection, editing, and minimal paraphrasing was necessary.

CONSUMER SCIENCE: IS CONCEPTUAL CONSENSUS POSSIBLE?

Karen P. Goebel[1] and Nancy H. Miller[2]
University of Wisconsin -- Madison

Evidence from participants at the Consumer Science in Institutions of Higher Education Symposium held at Madison, Wisconsin in 1982 indicated that there is wide diversity in conceptualizing the field of Consumer Science. There appears to be a lack of consensus in working definitions of concepts, courses, curricula, and in preparation of faculty in Consumer Science.

In preparation for the symposium, the authors interviewed deans of units where Consumer Science was located [1]. The purpose was to explore the administrator's perceptions of the Consumer Science program which were then discussed at the symposium. Differences in perceptions from the study and the resulting discussion at the symposium prompted the authors to propose a set of definitions for concepts identified at the symposium. While diversity may have benefits, a discipline or field of study needs a structure which is defined in relatively precise terms. The delineation of concepts associated with Consumer Science is a first step for educators in institutions of higher education to arrive at consensus regarding the content/definition of various concepts both for curriculum development and research endeavors.

At the symposium participants identified concepts during a brainstorming session [2]. No attempt was made by the authors to edit the list of concepts except to delete duplicatons and alpabetize the list.

Following the symposium, an attempt was made to define each concept using Consumer Science textbooks and other reference materials. Each definition was selected by the authors after comparing definitions from various sources. If a definition was not available, the authors developed one based on the literature. These definitions are presented in the appendix for further discussion by Consumer Science professionals; numbers in parentheses identify sources.

Future Directions

During the year 1983-84 the authors anticipate refining the definitions and working with professional colleagues to clarify the working definitions as they are used in Consumer Science. It is recognized that additions and deletions may be necessary in an effort to gain consensus within the field. The authors will actively solicit suggestions and welcome comments from American Council on Consumer Interests members. It is expected that consensus of concepts and clarity of conceptual definitions will strengthen the teaching, research and extension endeavors within Consumer Science.

REFERENCES

1. Goebel, Karen P., and Miller, Nancy H. "Administrators' Views of Consumer Science: Some Empirical Findings." In Proceedings of Consumer Science in Higher Education: The National Study, Office of Consumer Education, U.S. Department of Education, Washington D.C., 1983.

2. Miller, Nancy H. "Concepts: A Basis for Consensus in Consumer Science?" In Proceedings of Consumer Science in Higher Education: The National Study, Office of Consumer Education, U.S. Department of Education, Washington D.C., 1983.

APPENDIX

Concepts and Definitions

Budget--A plan-mental or written, and general or specific - that indicates how (quality/quantity) and when (sequence) to allocate available financial resources among various needs and wants. (4)

Caveat emptor--Let the buyer beware. (16)

Circular flow of money--The flow of payments from businesses to households in exchange for labor and other productive services and the return flow of payments from households to businesses in exchange for goods and services. (16)

Cognitive dissonance--The theory of the process of dealing with a disequilibrium between two pieces of knowledge. The amount of dissonance varies with changes in the positive and negative attributes of both the selected and rejected alternatives and with the degrees of commitment and volition in the choice. (3)

Communication--The exchange of information. (8)

Comparative advantage--If two nations (cities, individuals) have different opportunity costs of producing a good or service, then the nation (city or individual) with the lower opportunity cost has a comparative advantage in that good or service. (16)

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[1] Assistant Professor, Consumer Science and Extension Specialist, Family Resource Management

[2] Assistant Professor, Consumer Science and Assistant Dean, School of Family Resources and Consumer Sciences

Competitive markets--A market in which a very large number of small buyers and sellers trade independently, and as such no one trader can significantly influence price. (12) Perfect Competition - a market with many buyers and many sellers, with no single buyer or seller having noticable influence on price. (16)

Conceptual framework for decision making--Diagrammatic presentations of clusters of interrelated but not necessarily interdefined concepts relating to a particular set of behavioral phenomena. (3)

Cost-benefit analysis--The calculation and comparison of the benefits and costs of a program or project. (16)

Consumer--Any economic agent responsible for the act of consuming final goods and services. Typically, the consumer is thought of as an individual but in practice consumers will consist of institutions, individuals and groups of individuals. In the last respect, it is noteworthy that the consuming agent for many decisions is the household and not the individual. (13)

Consumer advocacy--The act or process of recognizing, promoting, and protecting the cause or interests of consumers. (2)

Consumer behavior--The behavior of individuals, families and groups as they take consumer roles in individual and group decision making or problem solving processes related to buying and to using products and services. (3)

Consumer choice--Implies availability of meaningful alternative selections and the ability of consumers to decide freely among them. (2)

Consumer citizenship--Citizen participation - understanding and taking actions to influence the environmental settings within which consumer decisions take place. (2)

Consumer demand theory--That area of economics which defines testable theories of how consumers behave in response to changes in variables such as price, other prices, income changes and so on. (13)

Consumer education process--Consumer education is the process of gaining the knowledge and skills needed in managing consumer resources and taking actions to influence the factors which affect consumer decisions. (2)

Consumer interest--Consists of policies that enhance the attainment of consumer sovereignty and enjoy the support of most understanding, fully informed consumers. (11)

Consumer need--Needs are those things considered essential to human existence or fulfillment. (2)

Consumer price index--A monthly measure, compiled by U.S. Bureau of Labor Statistics, of changes in the prices of goods and services consumed by urban families and individuals.(10)

Consumer protection--Public and private services, agencies, or policies, including laws and regulatons which are designed to protect consumer rights and enhance consumer interests. (2)

Consumer redress--Consumer redress is the result of performance failing to match reasonable standards or failing to work at all. (11)

Consumer representation--The selection of people to speak on behalf of consumer interests in official capacities, such as on advisory boards, regulatory commissions, or boards of directors. (2)

Consumer responsibilities--The obligations which are a part of an appropriate consumer role. (2)

Consumer rights--Powers, privileges, or protections to which consumers are justly entitled or which have been established by law. (2)

Consumer sovereignty--Consumers, by the pattern of their purchases or the way in which they cast their dollar votes, dictate to producers which goods will be produced. (15)

Consumerism--A social movement seeking to augment the rights and power of buyers in relation to sellers. (11)

Consumption--
a) The purchase of consumer goods and services.
b) The act of using goods and services to satisfy wants.
c) The using up of goods. (16)

Countervailing power in the market place--Power in one group which has grown as a reaction to power in another group. (16)

Credit--Consumer credit is defined by the Federal Reserve Board as "short-and intermediate-term credit extended to individuals through regular business channels, usually to finance the purchase of consumer goods and services or to refinance debts incurred for such purposes." (7).

Diffusion of innovation--Rates of acceptance by individual and groups. To be accepted as an innovation, a novelty must: (a) have meaning for the potential acceptor, in the sense of being understandable and related favorably to previous experience; (b) satisfy a want better than some existing means; (c) be congruent or compatible with valued cultural patterns with which it is to be linked; (d) be sufficiently divisible so that tentative trials may be made; and (e) be communicable from one person to another. (3)

Discounting NPV (net present value)--The process by which the present value of one or more future payments is calculated using an interest rate. (16)

Distributional equity--Justice or fairness in the manner in which the economy's output is distributed between individuals. (13)

Economize--To make the most of limited resources; to be careful in outlay. (16)

Economic system--The organization or structure of the production, distribution, and consumption of goods and services in a society. (2)

Economies of scale--Reductions in the average cost of a product in the long run, resulting from an expanded level of output. Also known as long run increasing returns. (13)

Elasticity of demand--Usually taken to refer to the (own) price elasticity of demand, but care should be taken to specify which elasticity of demand is being discussed. (Price Elasticity of Demand, the responsiveness of the quantity demanded of a good to its own price. To avoid the measure of elasticity being sensitive to the units in which quantities and prices are measured, the elasticity of demand is expressed as the percentage change in demand that occurs in response to a percentage change in price). (13)

Family (as a unit of society)--A statistical concept that attempts to measure the number of households composed of individuals related by blood, marriage, or adoption and residing together. The consuming unit may be one person or a family living together in a household. The household is defined as people living together and supported by the common pool of income. (3)

Financial management--The establishment of goals and procedures for the use and conservation of financial resources. (2)

Financial policy--The deliberate use of the government's revenue-raising and spending activities in an effort to influence the behavior of such macro variables as the GNP and total employment. (9)

Flow and stock resources--All processes within the managerial system contribute to the flow of resources and involve some change in their value. Resources may be developed or gained by the family system and kept for later use, thus they become a part of the family's "stock" of resources. Through managerial decisions and actions, resources are added to the stock or are taken from the stock. (4)

Goals--Specific aims or objectives which reflect a set of values. (2)

Human capital--The capitalized values of productive investments resulting from expenditures on education, training, and health improvements. (9)

Income--The amount of funds, goods or services received by an individual corporation or economy in a given time period. (13)

Inflation--A persistent upward movement in the general price level. It results in a decline of purchasing power. (10)

Information--Knowledge obtained through investigation, study, instruction, or communication. (2)

Insurance--Insurance is a cooperative device for sharing risks. It is a device that assures a sum of money with which to meet the uncertain losses resulting from damage to, or destruction of, life or property. Insurance transfers the risks of many persons to an insurance company. Insurance permits individuals to exchange the risk of a large loss for the certainty of a small loss. (13)

Interest rates--Interest is the price paid for the use of money over time. It is usually expressed as a rate charged or earned per period, hence interest rate. In turn, interest rates are typically expressed as a percentage of a principal (initial amount) borrowed or loaned. (7)

Levels of living (or consumption)--The combination of wealth and services actually experienced, enjoyed or suffered by the individuals or group. (3)

Managment process--Planning, organizing and controlling action; and evaluating the results of action. (5)

Marginal analysis--The emphasis on the last or marginal unit as in marginal cost, marginal utility, etc. Mathematically, the rate of change of one variable with respect to another.

Marginal propensity to consume (MPC)--The change in consumption divided by the change in income that brought it about (mathematically, the rate of change of consumption with respect to income.) (9)

Market power--The ability of a firm or individual to influence the terms of trade through their action. In a perfectly competitive market there is no market power.

Market structure--Characteristics of market organization likely to affect behavior and performance of firms, such as the number and size of sellers, the extent of knowledge about each other's actions, the degree of freedom of entry, and the degree of product differentiation. (9)

Maximizing behavior--The assumption that each economic unit will act rationally and in a logical manner; if an item is available at two different prices it is expected that, other things being equal, a buyer will buy the lower-priced one. (12)

Mediation--Efforts by a third party to help resolve a dispute.(12)

Mixed economy--Economy in which some decisions are made by firms and households and some by central authorities. (Most real world economic systems are mixed.) (9)

Monetary policy--Central bank policies aimed at changing the quantity of money or credit conditions; for example, open market operations or changes in required reserve ratios. (16)

Money income-- Income measured in dollars or, in another country, income measured in the currency of that country. (16)

Morality--The evaluation of or means of evaluating human conduct, as a set of customs of a given society, class, or social group which regulate relationships and describe modes of behavior to enhance the groups' survival. (1)

Nonprice competition--Competition by sellers by means other than price cutting. Advertising, product differentiation, trading stamps, and other promotional devices are examples. (9)

Open market--Market with free or easy access to all potential participants.

Opportunity cost--The cost of using resources for a certain purpose, measured by the benefit or revenues given up by not using them in their best alternative use. (9)

Persuasion--The act of winning over (someone) to a course of action by reasoning or inducement. (1)

Planning--Series of decisions concerning future standards and/or sequences of action. (4)

Political system--The organization or structure of government and those forces which influence public policy in a society. (2)

Preference--Refers to choice or ordering of choices among two or more alternative products in a given environment by a consumer or group of consumers. (3)

Present value (PV)--The value now of a sum payable at a later date or of a stream of income receivable at future dates. PV is the discounted value of future payments. (9)

Problem-solving--Involves the decision-making process in special situations requiring action. (4)

Product standard--A physical, written, graphic, or other representation of a product or a procedure established by authority, custom, or general consent with which other products or procedures of a like nature are compared for identification or measurement or to which they are made to conform. (6)

Productivity--Output produced per unit of input; frequently used to refer to "labor productivity", measured by output per hour worked. (9)

Pure public good--A good (or service) with benefits that people cannot be excluded from enjoying, regardless of who pays for the good. (16)

Quality - price relationship--Recognition that the price of a good is an incomplete description of the terms of trade unless accompanied by some description of the goods' relative characteristics.

Quantitative analysis--The use of statistical or mathematical models and measurement.

Rate of return--
(a) Annual profit as a percent of net worth. (b) Additional annual revenue from the sale of goods or services produced by plant or equipment, less operating costs (labor, materials, etc.) and depreciation, as a percent of the depreciated value of the plant or equipment. (c) Discount rate at which the present value of future returns (additional revenues less operating costs) from new plant or equipment equals the acquisition price of that plant or equipment. (16)

Rationality--The quality or condition of being based on reason or logic. (1)

Rate of substitution--Marginal rate of substitution (MRS) (a) In consumption the slope of an indifference curve, showing how much more of one commodity must be provided to compensate for the giving up of one unit of another commodity if the level of satisfaction is to be held constant. (b) In production, the slope of an isoquant, showing how much more of one factor or production must be used to compensate for the use of one less unit of another factor of production if production is to be held constant. (9)

Real income--A household's income expressed in terms of the command over commodities that the money income confers; money income corrected for changes in price levels, thus the purchasing power of money income. (9)

Regulation--A principle rule, or law, designed to control or govern behavior--a governmental order having the force of law. (1)

Relative price--The price of one good or service as compared to the price of another good or service.

Resources--Means that have characteristics capable of meeting demands. (4)

Risk--The hazard or chance of a loss, that is, a negative event. (4)

Savings--Loosely but commonly, disposable personal income less consumption expenditures. More strictly, disposable personal income less consumption expenditures less payment of interest on consumer debt. (16)

Scarcity--Scarcity and abundance are relative, and vague, descriptions of the availability of useful resources for human purposes. Any resource which commands a price in economic transactions-resources as diverse as fertile soil, machines, or human talent-may be called scarce. The rationale for this market-oriented definition is that at a lower price some economic agents would desire to employ more of the particular resource. In other words, when a resource commands a price in the market, some potential users will be induced to forego rewarding applications of the resource. (7)

Scientific method--Generally taken to include rules for concept formation, conduct of observations and experiments and validation of hypotheses by observations or experiments. (1)

Sector (private)--That portion of an economy in which principal decisions are made by private units such as households and firms. (9)

Sector (public)--That portion of an economy where production is under control of the central authorities or bodies appointed by them, including all production by governments and nationalized industries. (9)

Social system--The structure of relationships among human beings in a society. (2)

Standard of living--Quantity and quality of goods and services that an individual or group desires. (4)

Standards--Measures of quantity and/or quality that reflect the reconciliation of resources with demands. (4)

Taxation equity--The extent or degree to which particular tax burdens are distributed relative to income, wealth, or ability to pay.

Time as a resource--Time and the energies and abilities of members of a family or household are resources which can be used to obtain goods the members desire. (5)

Time preference--The desire to have goods now rather than in the future. The amount by which goods now are preferred over goods in the future. (16)

Values--Meanings relating to what is desirable or has worth. Ideas and principles which an individual, group, or society consider desirable, or important. A system of values or value orientation is an integrated structure of needs, attitudes, interests, accepted models of conduct, and generalized ends which motivates or restricts behavior in all aspects of life. (5)

Value clarification--Process that involves weighing alternatives to decide just what is important to each of us as individuals. (14)

Well-being--State of being happy, healthy, or prosperous. (1)

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THE CHANGING LANGUAGE OF A MASS CONSUMPTION SOCIETY: A PRELIMINARY STUDY OF BRAND NAME USAGE IN BEST-SELLING AMERICAN NOVELS IN THE POST-WORLD WAR II ERA

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ABSTRACT

This study constitutes a first attempt to understand the influence of commercial practices, such as advertising, on American popular language. The method of content analysis was employed to examine the usage made since World War II of brand names in the texts of 31 best-selling American novels. Dramatic increases (over 600%) were found for two measures of usage over the 30-year period of study (1946-75).

This study is the first in a series of research efforts to determine the extent to which language in America has been influenced by advertising and other commercial practices over a 30-year time span. The period of study is 1946-75 and the focus of examination is the use of brand names (associated with consumer products and services) by 31 authors of best-selling American novels. A distinguishing characteristic of the study is its use of a social scientific approach to address a topic not usually considered amenable to such rigorous analytical treatment.

STUDY BACKGROUND

By way of background it should be noted that advertising, the commercial practice of primary interest to the study, has been a source of controversy in the United States for over fifty years. In their 1927 classic, Your Money's Worth, Stuart Chase and F. J. Schlink concluded that, "We are Alices in a Wonderland of conflicting claims, bright promises, fancy packages, soaring words, and almost impenetrable ignorance" (p. 2). Similarly harsh sentiments continued to be voiced through the last few decades with the publication of Vance Packard's Hidden Persuaders in 1957, John Kenneth Galbraith's New Industrial State in 1967, and Stuart Ewen's Captains of Consciousness in 1976.

In each of these works the rapidly growing size and power in America of advertising and other commercial practices have been represented as a worrisome development. Of particular concern is the dramatic rise in advertising expenditures since World War II, from $2.9 billion in 1945 to $28.1 billion in 1975, an almost tenfold increase in the space of 30 years. This development has led critics to decry what they see as the general debasement of American society throughout the commercialization of its language and culture.

Since these charges have typically been viewed as incapable of operationalization, their expressions have remained largely limited to the subjective and the impressionistic. It is this situation which stimulated the objective approach assumed herein. The current study is a first attempt to generate an historical data base which may permit a more meaningful discussion of one aspect of the commercialization problem, namely the uses made over time of brand names associated with consumer goods and services in the popular language of America.

Of special interest is the major hypothesis of the study. Since a primary objective of most consumer-oriented advertising is the identification and subsequent purchase by consumers of a particular brand-named product (Don't say beer, say Bud"), it seems reasonable to hypothesize that success in reaching this objective for thousands of business firms over the years has been accompanied by an elevation of the level of consumer familiarity with, and usage of, brand names in everyday language. In light of the unavailability of a representative sample of transcripts of telephone conversations or records of written correspondences between friends or relatives over a substantial period of time, it was decided to explore this hypothesis by examining a surrogate. Best-selling novels were selected as the surrogate since they are available over the 30-year period of interest to the study and their popular success with the American public (McElroy, 1968; Sharon, 1973) strongly suggests that the language used in these books was appropriate for the times in which they were published.

THE STUDY SAMPLE

The study sample consisted of 31 fictional best-sellers published between 1946 and 1975. They were selected using several criteria. To assure that each book in the sample reflected the events and circumstances of its time of publication, only books set (at least in part) in contemporary America were selected for study. It was also decided that each of the books selected would be the product of an American author writing at an early stage of his or her career as a novelist; and indeed, almost all of the books selected were first novels. (The latter criterion was employed to exclude the products of "formula writers" such as Erie Stanley Gardner who, over a series of decades, penned dozens of best-selling Perry Mason mysteries each of which was deliberately designed to avoid being tied to a particular time period.) Application of the above-mentioned criteria to the total population of several hundred best-selling American novels published in the 1946-75 period led to the 31 eligible entries which constituted the study sample.

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THE MAJOR FINDINGS

A content analysis of the contemporary American segments of each of the 31 books (the whole book in most instances) revealed that the total number and variety of brand names (per 10,000 words of text) had each undergone a striking exponential rise over the 30-year period of study. In particular, the books published in the 70's were more than 600% higher than the books published in the 40's on each of two measures of brand name usage (total number and varieties). Additional data were secured and analyzed to test the generalizability of the study findings from brand names to their generic counterparts, and from usage in popular literature to usage in popular language (as reported by American college students).

Taken together the various findings lend support to the charges of increasing commercial influence in the American popular language of the post-World War II era.

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THE CONTINUING ARMS RACE: A DIRECT ROUTE TO 1984?

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ABSTRACT

Analysis of the arms race as an oligantipaly game suggests that the US and the USSR are already partway to the economic stagnation predicted by Orwell in his classic, 1984. Casual empiricism supports that suggestion. The research agenda implied by this dismal view of future consumption prospects includes examination of the implications of the oligantipaly model from both a welfare and a production - relative price (or GNP) point of view.

In 1949, George Orwell envisioned the year 1984 to be one in which military expenditures and perpetual wars among the three world powers effectively limited the growth of real consumption; perpetuating the existing class structure and the status quo in each of the world states [17]. Although we don't yet match his conception (for example, Western Europe is still independent of the USSR, and China doesn't yet qualify as the military and economic equal of the two super powers), there is some evidence that the Orwellian theme is being played in altered form. That evidence suggests a stagnancy in the growth of consumer welfare in the near term - at least in the USSR and the US.

Recent press and scholarly reports suggest that real income, real income per capita, and real disposable income per capita are not growing or are growing rather slowly in the US and the USSR. Census Bureau data indicate, for example, that real family income in the US was virtually unchanged from 1970 to 1980 [10]. Similarly, Soviet consumption growth has slowed markedly in recent years [12]. Overall Soviet growth has been gradually declining during each successive five year period, and the growth of (total factor) productivity in 1971-79 was zero or negative [8, pp. 106-7]. The growth problem continued into 1982 [7, pp. 283-94]. Other data show slow growth rates in American and Soviet real GNP and real GNP per capita in recent years in contrast to faster rates in nations like Japan, Yugoslavia, Romania, France, West Germany and the European Community in general [15, pp. 28-9 and 30-1 respectively]. Even with the usual difficulties, concerns and caveats surrounding international comparisons, the crude data indicate that both of the super powers are experiencing growth problems. The fundamental question entertained by this paper is:

> "To what degree might these growth or stagnation problems be traceable to the continuing arms race?"

> "The primary aim of modern welfare ... is to use up the product of the machine without raising the general standard of living." [17, p. 155].

The emphasis in addressing that question in a preliminary way and developing a related research agenda is on the economics of the question, not on comparisons of military might.

OLIGANTIPALY AND NEGATIVE SUM GAMES

George Orwell's predictions, of course, were imperfect. The world of 1983 does not consist of three equally powerful world states which exhibit no "genuine ideological differences," are at perpetual war with each other, and are each governed by inner party apparachiki. Our current state is better described by a model that predicts some, but not all, of Orwell's results. That model of oligantipaly (few rivals) articulates rather well with what we are now observing and has strong implications for future levels of consumption.

The oligantipaly model characterizes the US and the USSR as being involved in a strategic struggle (or game) at least since 1946-48 (I use the death of Jan Masaryk in February 1948 as my reference date). In all such rivalries, each party plays to gain an advantage over the other party (or parties) or to counter the strategic moves of the other parties. Each party recognizes that he can lose points, positions, or the entire game if another party counters an initiative by a successful strategy of his own. In one subset of game theory, no major participant can withdraw or reduce his activity once the game has begun without risking major losses. That may be true even if every player is bearing net costs by continuing to play. See [14, p. 5]. Succinctly stated, the game may be a negative sum game, but the game goes on.

The best nonmilitary, nonpolitical analogy I know of is that of advertising and brand promotion in the cigarette industry [9]. Given the power of promotional techniques to alter consumer preferences among brands, but not to change significantly the demand for all cigarettes, each firm has a strong incentive to increase its market share by advertising and the like. With equally effective advertising skills available on the open market, however, other firms can counter the negative impacts of their rivals' ads. The market shares and total cigarette sales may change little, but each firm (and therefore the industry) experiences sizeable promotional expenses. No firm, however, can unilaterally stop or substantially reduce its promotional activity without risking very major losses. Obviously, the game is a negative sum game for cigarettes companies, but the advertisers (as a whole) win. The general position of the US, the USSR, and to a lesser degree China is quite analogous to that of the cigarette companies.

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Note also the close linkage between the Orwellian scenario and the oligantipaly model. Orwell postulated three super powers plus some weakly organized and contested areas of the globe. Oligantipaly games are reasonable models only when each of the limited number of players is large enough to seriously damage the other(s) by independent action and when the damaged party knows from whence the damage came. The game itself is rooted in the power (or economic) structure.[2]

FINANCING THE MILITARY BUILDUP

The manner in which military expenditures are financed by the parties is of importance to the impact of the arms race on consumption and investment. The decades of the 1960's and 1970's provide a useful illustration.

As the period began, the world knew and the super powers knew *a fortiori* that a nuclear standoff existed and that any major nuclear confrontation, with high probability, would destroy the parties and civilization as we know it. Yet, as the oligantipaly model predicts, the struggle between the two major powers continued unabatedly. Strategic moves were made on the periphery of their respective spheres of influence and in underdeveloped areas.

For all its anticolonialist and nationalist overtones, Vietnam represented one of those strategic theaters. In that confrontation, the US found itself unable to negotiate a satisfactory settlement, unable to win *via* the special forces so dear to President Kennedy's heart, and unwilling to escalate the conflict to the level some felt necessary for a military victory. The political-psychological impact of that perceived debacle, the post-Vietnam malaise, pervaded the entire domestic and foreign policy scene and led to a scaling-down of the growth and level of US military preparedness. See [16] for a dollar cost comparison of US and Soviet expenditures from 1965-1980. Such a "mind set" would have forced any democratic government to scale back military expenditures even without the obvious political "need" to finance the "War on Poverty" and its legislated extensions and amendments.

Given our unilateral de-escalation, the Nixon and then the Ford Administration sought to counter the prevailing political-psychological limits on our ability to play the game by emphasizing a strategy akin to the old balance of power techniques. Such a strategy was a "natural" for specialists in geopolitics like Henry Kissinger and William (Bill) Hyland. As the British and the central powers of Europe demonstrated throughout history, such techniques - if successful - can be very cost effective. Suffice it to say that many of these geopolitical plays; e.g., those in Egypt, China, and even Iran (for a time), were quite successful - altering the locus of pressure on the USSR and relaxing its influence in some Moslem lands. The moves permitted the US to compensate for reduced military spending - thus making the best of a "bad situation" brought on by domestic politics and the psychological reaction to Vietnam.

It is not yet possible to say definitively whether Presidents Nixon, Ford, or Carter expected the USSR to match or follow our de-escalation. By the usual rules of the oligantipaly game, one might have expected them to seize upon the US political situation as a target of opportunity, and they did so. According to CIA, the USSR spent 11-13 percent of their GNP on military goods and services each year from 1965 through 1978. That share grew to 12-14 percent since 1978 - as the Soviet economy slowed. Throughout the entire period, Soviet military expenditures grew 4-5 percent per annum [8, pp. 137; 20, p. 7].[3]

The continued Soviet expenditures, the consequent shift in the balance of military strength, and the Soviet willingness to use the new "muscle" around the world led to a cessation and then a reversal of American de-escalation. Indeed, beneath the facade of political rhetoric, both the Carter

TABLE 1. Rate of Growth of Federal Expenditures: Compounded Annual Rate of Growth

Terminal Quarter	(1) Nondefense Federal Expenditures	(2) Defense Federal Expenditures	(2) $\gtrless$ (1)
2/77	10.9	7.3	-
3/77	20.5	1.7	-
	Revised Series		
4/77	12.4	4.3	-
1/78	4.3	3.4	-
2/78	1.8	19.8	+
3/78	15.0	8.3	-
4/78	16.4	11.0	-
1/79	3.5	8.7	+
2/79	3.3	9.3	+
3/79	23.6	14.3	-
4/79	16.0	24.3	+
1/80	18.2	28.9	+
2/80	18.6	10.5	-
3/80	26.0	1.5	-
4/80	14.7	25.4	+
1/81	12.3	15.3	+
2/81	0.3	22.3	+
3/81	22.4	10.8	-
4/81	12.9	36.5	+
1/82	1.1	- 1.7	-
2/82	- 1.2	26.3	+

Source: Federal Reserve Bank of St. Louis, *Monetary Trends*. Issued March 25, July 30 and October 26, 1982. National Income Accounts Budget data.

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[2] Economists will recognize these principles from oligopoly theory and that such conditions do not exist in competitive markets. Oligopoly (few sellers) is a subset of oligantipaly, as is oligopsony (few buyers) and bilateral monopoly.

[3] These figures are in dispute. Steven Rosefielde argues that methodological errors by CIA lead to an understatement in the "size, growth and momentum of the Soviet arms buildup." [19, p. 256].

and the Reagan Administration sought to change the emphasis on military versus nonmilitary expenditures (See Tables 1 and 2). Nevertheless, the Carter and the Reagan Administration differed in the way each financed the buildup.

Simply stated, the Carter Administration financed the increased defense expenditures toward the end of its term by monetizing those expenditures - just as it financed much of the increased expenditures on social service and entitlement programs. Because the FED's monetary policy was not too stringent for most of Carter's term, inflation rose as did deficits and money income. As inflationary expectations increased, interest rates rose apace. Because spending on social services continued to grow and because many of these programs were explicitly or implicitly indexed, the weight of the military and nonmilitary expenditures rested on the middle and upper middle income groups. They were taxed via "bracket creep" and via decreases in the real value of their incomes (or more precisely, their cash balances). As a consequence, much of the impact of the increased (defense and nondefense) spending was on real consumption with some impact on real investment as interest rates rose.

TABLE 2. Rate of Growth of Federal Expenditures Since Third Quarter 1977: Compounded Annual Rates of Growth

Terminal Quarter	(1) Federal Nondefense Expenditures	(2) Federal Defense Expenditures	(1)-(2)
4/77	12.4	4.3	8.1
1/78	8.3	3.9	4.4
2/78	6.1	8.9	- 1.6
3/781	8.3	8.8	- 0.5
4/78	9.9	9.2	0.7
1/79	8.8	9.1	- 0.3
2/79	8.0	9.2	- 1.2
3/79	9.8	9.8	0.0
4/79	10.5	11.3	0.2
1/80	11.2	13.0	- 1.8
2/80	11.9	12.7	- 0.8
3/80	13.0	11.8	1.2
4/80	13.1	12.8	1.5
1/81	13.1	12.9	0.2
2/81	12.2	13.5	- 1.3
3/81	12.8	13.4	- 1.9
4/81	12.8	14.6	- 0.6
1/82	12.1	13.6	- 1.5
2/82	11.4	14.3	- 2.9

Source: Federal Reserve Bank of St. Louis. Monetary Trends. Issued October 26, 1982. National Income Accounts budget data (Revised series).

By contrast, the Reagan Administration has operated largely under a strict monetary regimen - one generally supported by the Administration. And - as expected by all good economists - inflation has declined in response to the monetary restraint. As Nobel Laureate James Tobin notes however, "Reaganomics" (as originally defined) is not a consistent policy [11, pp. 46-47]. The initial tax adjustments - both for individuals and especially for corporations - substantially exceeded the adjustments in actual and planned expenditures; resulting in larger deficits. Those deficits, of course, were exacerbated somewhat by the 1981-82 recession. Financing the continuing and growing federal debt required the Treasury to "crowd out" private investment from the financial market(s). Any positive "supply side effects" - likely to be small in the short run - were swamped by the crowding out phenomenon. Thus, although some part of the increase in defense expenditure has been financed and will be financed via reductions in entitlements, social services, revenue sharing, and the bureaucracies administering those programs, the bulk of the financing has been via the financial market. Moreover, the failure of the executive and legislative branches to reach any broad concensus on the incidence of the expenditure burden heightens the level of uncertainty in financial markets.[4] Despite the partial legislative-executive accord in late 1982 and the interest rates reductions, interest rates can be expected to remain high by historic standards as will the need for government financing of the deficit. It follows that the Reagan Administration has financed and probably will continue to finance much of the arms buildup out of investment.

Interestingly, the USSR has a similar problem in financing its continuing military buildup. Historically, the USSR has avoided the inflation which might have accompanied its spending for military and investment purposes by wage controls and turnover (excise) taxes on consumer goods - adjusting the taxes to the appropriate level [6; 1]. If the Soviet leadership intends to preserve what it has gained in relative strength over the past 10 to 12 years, they must maintain or increase their military expenditures. Either of these is difficult. According to CIA, maintenance of the historic growth rate of military expenditures could absorb 50 to 75 percent of the expected annual increment in GNP as early as 1985 [8, pp. 137-8]. Note that, despite awareness of serious production problems in Soviet agriculture, capital investment in that sector has leveled off. Anton Malish of the US Department of Agriculture says that the Soviet leaders appear:

> "to be counting on more efficient use of existing resources with the hope that the 3-year spell of miserable weather is over" [4, p. 10].

Even the 11th Five Year Plan calls for capital investment to grow more slowly than consumption [20, p. 3]. Included in the overall plan, of course, are the expected military and nonmilitary "needs" of the client regimes in Poland, Cuba, and Afghanistan as well as the direct military drain of the Afghan War. It seems quite likely therefore, that Soviet military spending is now impacting Soviet investment as well as (or perhaps more than) Soviet consumption.

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[4] John Seater, NCSU, initially called my attention to this effect. My thanks also go to Martin Bronfenbrenner, Duke University, Solomon Polachek, UNC(CH), and two anonymous referees for helpful comments.

Unless the financing problems are resolved, both the US and the USSR appear to face a period of economic doldrums in the near future. The US, of course, could avoid a portion of that prospect by further adjustments in nondefense spending, by increasing taxes, by a stretch-out of defense spending, or some combination of the three. Alternatively, one might expect (in a number of guises) a return to financing *via* inflation. There were certainly both White House and Congressional pressures in that direction during 1982 [5]. Indeed, as Arthur Burns argues, conflicts between monetary and fiscal policies (in Western democracies) are usually won by the political forces encouraging the deficits [2]. Such pressures on the monetary authorities are exacerbated by fears and prospects of international liquidity deficiencies if "adequate liquidity" is not "made available." Thus, if political support for a stable monetary policy erodes, "Volckerism" could fade away without the fanfare or the retreat parade usually accorded to brave warriors.

THE NEGATIVE SUM GAME AND FUTURE CONSUMPTION LEVELS

If the oligantipaly analysis is not too wide of the mark, it is in the interests of both the US and the USSR to negotiate mutual reductions in forces so as to free up resources for investment (and current or future consumption). These hopeful prospects, however, must be welcomed with an understanding of the schizophrenia endemic to most (if not all) oligantipaly situations. Although it may pay each party to negotiate mutual (and verifiable) force reductions, it simultaneously pays each party to exercise other strategic options (say, in the Middle East) and even to cheat on negotiated agreements. *That apparent anomaly is built into the nature of the game*.

Even as the game is being played, the free riders and fellow travelers of the world - nations like Japan, Romania, perhaps Sweden - can be expected to gain trade advantages and to increase their relative market shares and income levels. Others, like China and the Palestinians, are apt to find it in their interest in the short run to negotiate with both sides. Indeed, if "all-out" war between the super powers is avoided and if negotiated scaledowns are small, the super powers, *ceteris paribus*, stand gradually to lose their preeminence among nations - as they starve their civilian economics, their education, their basic sciences, and their R & D to support the arms buildup, engage in foreign military sorties, or counter insurgencies. Occasional technological "peeloffs" from military R & D would, of course, forestall their relative decline, but probably could not prevent it. Similarly, the wealth creating potential of new technology - microelectronics, robotics, production in space etc. - would help to offset the relative decline; provided that the financial climate and interest rates are favorable to such ventures. Clearly, the growth of real consumption worldwide will be smaller than it could have been in a world less well armed, but some nations - those that eschew military expenditure (not necessarily military production) and emphasize investments in human and nonhuman capital - can be expected to gain absolutely and relatively. The gains for these "competitive fringe" nations will be accompanied, however, by the risk that their increasingly comfortable lives may be ended abruptly by unilateral actions of the major powers.

OLIGANTIPALY AND THE RESEARCH AGENDA

With this reformulation (or updating) of Orwellian analysis as a framework, a spate of testable hypotheses emerge for both economic and multidisciplinary research. Those hypotheses can be conveniently divided into two sets: (A) the actual or potential welfare effects and (B) the production - relative price effects of the rivalrous conduct.

First, there may be a substantial welfare loss from continuous or escalating military expenditures even if each oligantipalist remains on his production possibility frontier (i.e., at full employment) and finances all the military expenditures *via* a tax on consumption (pay-as-you-go-financing). Even though one might reasonable expect "national security" or "protection from foreign aggression" to enter with positive weight into the utility function of the average citizen in each nation, it is unlikely that such expenditures will add much utility at the margin under oligantipaly. GNP (at factor costs) could grow *via* the military buildup with no addition or even a reduction in the perceived welfare of most or all individuals. Certainly, after years of military rivalry, the perception that the multitudinous expenditures have not raised security will tend to grow. Given the nature of the oligantipaly game, that perception need not be inaccurate. Note that this point is not equivalent to the old public goods (and free rider) phenomenon, but they are obviously related. Even without defining (or conceptualizing) a social welfare function, the oligantipaly analysis suggests alterations in consumer behavior over time including growing tax avoidance, draft avoidance, calls for unilateral disarmament, and an intensification of the usual free rider problems. The growth and estimation of the magnitude of such responses are obviously questions of concern to those studying consumption, the "underground economy" and the like.

In my view, it is just such a perception which underlies the "peace movement" - a statement that is itself a testable hypothesis. It would appear, however, that neither the "doves" nor the "hawks" fully comprehend the dynamics of oligantipaly. If the model employed here has any predictive power, the actions usually proposed by "doves" can easily create conditions that induce the other side(s) to pursue short run targets of opportunity; leading in Hegelian fashion to the inevitable hawklike reaction. Similarly, the actions pursued by "hawks" simply exacerbate the underlying rivalry; inducing reciprocal military expansion in the rival's camp. On net balance, then, actions by both "hawks" and "doves" may increase the real losses experienced by one or both sides. Indeed, the schizophrenia noted above together with the actions and the "doublethink" it engenders require extensive evaluation. If such conditions necessarily prevail under oligantipaly; that is, if broad coalitions and agreements cannot be formed and maintained, then "detente" as we generally use the word simply cannot exist as long as the oligantipalistic structure exists. Oligantipaly implies that it is "not in the cards" or, more accurately, not in the game for there to be a general relaxation (as distinct from precisely defined and enforced mutual relaxations in specific areas). The research agenda also includes examination of the attempts to construct coalitions around specific interest areas.

Research area "B" - that dealing with production and relative price effects - includes several topics. Perhaps the most active of these is the attempts to measure the consumption and investment tradeoffs implied by military expenditures or shifts in such expenditures. The work of DeGrasse and Murphy on "The High Costs of Rearmament" is one example. They concluded that:

> "By decreasing government aid and hoping that economic growth will provide jobs for the poor, Reagan's (defense) policies could dramatically restrict ways for the poor and middle class to raise their standard of living" [3, p. 22].

One assertion of their research effort is that expenditures for military goods and even military R & D have come at the cost of civilian R & D; slowing technological progress. Another approach is represented by an important staff study for the Joint Economic Committee [13]. Among its conclusions are several warning of the inflationary potential and the "bottleneck" problems of the military buildup. The Independent Commission on Disarmament and Security Issues (ICDSI) is also conducting research in this area. The ICDSI concludes that:

> "The increase in military spending now underway threatens the economic security of all countries" [18, p. 5].

These recent studies, among some others, represent the first in what should become a large number of inquiries into these areas of concern. Some of these analyses, such as that by the ICDSI, may well be challenged as reflecting, simply, the policy position(s) of the sponsoring organization(s). Hence, there is a need for the widest possible discourse on these issues so as to assure scholarly objectivity and understanding of the tradeoffs we face.

Research area "B" also includes examinations of product and factor market prices. The JEC study noted above [13] also deals (in a preliminary way) with the impact of military expenditures on some prices. Other examinations might reasonably include the impact of military spending on the regional distribution of employment and unemployment and on the matrix of consumer goods prices. Clearly, in recent months, military expenditures appear to have created several bright spots in the mosaic of high area unemployment rates across the nation. The more difficult research question is the degree to which the alteration in government expenditure patterns has helped to resolve or exacerbate the structural transformation problems being experienced in several parts of the nation.

Also included in "B" is an examination of the effect(s), if any, of military expenditures on economic growth. As noted above, any such effect may be closely connected to the method for financing the military outlays. Also mentioned above are comparisons and detailed analyses of consumption and investment growth patterns across player and free rider nations - so as to test the hypothesized gradual decline in the economic position of the major players and to assess any implications of the game on international exchange rates, trading patterns, international investment patterns, and the like. Given the close relationships among the world's trading nations, however, this area of analysis is both difficult and hazardous. As Herbert Stein has noted [2], the relatively slower growth rate for the US in recent years is mirrored to some degree among our trading partners. The "macro" nature of interrelationships among the trading nations plus the heavy influence of US interest rates on exchange rates, currency values, and the economic health of other nations makes it difficult to isolate the underlying cause(s) for different growth patterns and assess the impact of the arms race on these growth patterns in each nation. As noted above, US interest rates can be expected to be influenced by both our monetary and our fiscal policies.

SUMMARY

Although we appear to be taking a different route to 1984 than that described by Orwell, the oligantipaly model suggests that the two super powers are already partway to the economic stagnation he predicted. Until we test the hypotheses suggested by that model and assess carefully the consumption and investment tradeoffs associated with the arms buildup, we have little assurance that Orwell was wrong about the levels and trends in real consumption in 1984 and beyond.

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THE EFFECT OF CONSUMER'S SOCIAL CHARACTERISTICS ON PSYCHIATRIC DIAGNOSES AND MEDICATION RECOMMENDATIONS

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ABSTRACT

The study examines the effects of a consumer's social characteristics on psychiatric diagnostic and medication decisions. It is argued that decisions based on irrelevant consumer characteristics will generate consumer dissatisfaction with health services. Results indicate psychiatrists base their decisions on the consumer's behavior rather than irrelevant social characteristics. It is concluded that psychiatrists are adopting a more consumer-oriented approach in their decision making.

The present study examines the effect of a consumer's social characteristics on psychiatric diagnoses and drug treatment recommendations. The psychiatric perspective maintains that diagnoses and medication prescriptions are based on a consumer's behavior or symptoms [15, 16, 17, 18, 34, 48]. Labeling theorists argue that psychiatric diagnoses and medication decisions are differentially applied to health service consumers based more on their social characteristics than their actual behavior [48, 2, 9, 37, 38, 45, 46].

Psychiatrists violate the marketing concept when irrelevant consumer characteristics influence their diagnostic and treatment decisions. According to the marketing concept, their decisions should be based on the consumer's behavior in order to generate consumer satisfaction. The diagnosis is used as the basis for deciding what health services a consumer will receive. An incorrect diagnosis could lead to an inappropriate treatment which can stimulate consumer dissatisfaction with psychiatric health services.

Consumer satisfaction is an important outcome of psychiatric health services for a number of reasons. Consumer satisfaction leads to continued use of health services which is necessary for the economic viability of the practice [34]. Satisfied clients are less likely to sue for malpractice, which is a growing economic burden on physicians [35]. Satisfied consumers are also more likely to cooperate and comply with the physicians' directions [34, 31]. This should lead to an improvement in the consumer's health.

A great deal of research has indicated that psychiatric diagnoses were unreliable [19, 48, 43, 22, 24, 25, 26, 27, 28, 36, 42]. These studies have used various diagnostic classifications and did not study the relative influence of psychiatric versus social factors on diagnostic decisions. Other research has shown that suggestion effects influenced psychiatric diagnoses [8, 47] as well as the bleak biographical experiences of consumers [33].

It is difficult to assess the relative influence of a consumer's social characteristics on the diagnostic process. Confusing and conflicting results have been reported in this literature. Some research has found the effect of the consumer's sex to be minimal [1, 40] whereas other research has found that sex influenced a consumer's diagnosis [49, 14, 7, 20, 13].

There has been research on the effect of a consumer's race on psychiatric diagnoses. Some research has found minimal racial bias in diagnoses [3, 49, 39, 40] whereas other research has found that race influenced the consumer's diagnosis [4, 44, 10, 50, 11, 12, 41, 20, 51]. When we look at social class effects on diagnosis we find that some research has reported that social class had not influenced diagnosis [3, 14] while most of the research has found that a consumer's social class influenced the diagnosis [32, 5, 30, 21, 23, 6].

One explanation for these conflicting findings is that these researchers relied on the DSM-II or some other unreliable classification system which in turn produced inconsistent results. The majority of the research has indicated that a consumer's social characteristics had influenced a psychiatrist's diagnosis to some extent.

This bias should have also influenced medication decisions, even though the relative influence of social factors on this decision process was not addressed in the previous research. The present study will examine the effects of a consumer's level of educational attainment and occupational prestige on psychiatric diagnostic and medication decisions based on the DSM-III.

HYPOTHESES

The following hypotheses will be tested based on predictions of the labeling perspective regarding psychiatric decisions. For participants in both the mildly and severely impaired conditions:

Hypothesis 1: A psychiatrist's perception of a consumer's occupational prestige will be more strongly related to their diagnosis than their perception of the consumer's behavior.

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Hypothesis 2: A psychiatrist's perception of a consumer's level of educational attainment will be more strongly related to their diagnosis than their perception of the consumer's behavior.

Hypothesis 3: A psychiatrist's perception of a consumer's occupational prestige will be more strongly related to their medication prescription than their perception of the consumer's behavior.

Hypothesis 4: A psychiatrist's perception of a consumer's level of educational attainment will be more strongly related to their medication prescription than their perception of the consumer's behavior.

METHODS

Participants

A total of 48 residents in psychiatry and medical students on their psychiatric rotation participated in the study. Twenty-four participants were attending a southwestern medical school and twenty-four were attending an upper middle western medical school. Data was generated from groups of three participants in a seminar room during two days at their respective universities. Each participant was randomly assigned to a single experimental condition with a total of six participants for each of the eight experimental conditions. There were 31 males and 17 females ranging in age from 23 to 51 with an average age of 28.2 years.

DESIGN AND VIDEOTAPES

A 2x2x2 orthogonal factorial design experiment was conducted in which the occupational status, educational status. and level of impairment of a white male in a psychiatric examination was manipulated on a videotape which lasted 15 minutes. The dependent variables were the diagnostic decision and the medication decision. The consumer and psychiatrist on each videotape were the same two male, professional actors.

The videotapes were based on fixed transcripts for two different scenarios. In one scenario, the consumer's severity of impairment was mild while in the second scenario the severity of impairment was severe. The examinations were held constant by editing the previously recorded examination onto tapes on which the status resources of the consumer were varied. Educational status was varied in the examination by presenting a person who either had a masters degree in marketing or who had a high school diploma. Occupational status was varied by presenting a person who was a janitor or who was the head of the branch office of a large firm that sold calculators. A different videotape was made for each of the four possible combinations of these two status characteristics for both the mild and severe conditions.

The examinations presented on the tapes were a reconstructed synthesis of several actual psychiatric examinations. The information presented by the consumer about his "symptoms" included a wide range of behaviors so as to maximize the uncertainty and ambiguity of the psychiatric examination. The intention of this procedure was to allow for the application by the clinician of various diagnostic labels and to introduce uncertainty in the medication decision. Researchers have noted that ambiguity frequently exists in actual psychiatric practice [47, 32].

The consumer in the mild impairment condition had been brought to a hospital by ambulance for having taken an overdose of drugs at a party. After having his stomach pumped, he denied he was suicidal and insisted on his release. His wife had expressed concern about the recent purchase of a gun. He claimed he used the gun for hunting and protection. He argued it wasn't a safe world and he would have killed criminals if provoked. He recently lost 15 pounds, spent a lot of money, and moved from a small town to a large city. He claimed his home town was boring and everybody ganged up on him and watched him. He also recounted sleeping and occasionaly drinking on the job as well as not getting along with his boss. He reported a change toward slopiness in his personal hygiene habits and a slight loss of sleep and interest in sex due to nervous tension. He did not have halluncinations or delusions. He offered reasonable accounts to the psychiatrist for each accusation that had been made and had no previous history of mental illness nor brain damage.

In the severe impairment condition, the consumer was released to the psychiatrist by a dermatologist for injecting his groin area with his own feces in order to avoid having sex with his wife. He reported being victimized by neighborhood children who vandalized his home. He had shot a gun in the air and made threats while drunk to get his neighbor's attention. He argued that he had wanted to only scare the children and insisted he would not have really hurt anyone. He stated that he had written eight to ten letters a day for two weeks to the city council in order to get his neighbors to mow their lawns according to his schedule. He had recently joined a new fundamentalist church where he had spoken in tongues. He reported placing clothing on the roof of his house so that God would bless them. He admitted starting a fire in his garage by accident during a church meeting when he had knocked some candles over while speaking in tongues. He reported he had spent large sums of money on the church, was running for political office to restore old fashioned morals, and had destroyed a television and radio because only cheap sex shows were on. He reported sleep and weight loss. He had not hallucinated, had no brain damage, and had not been to a psychiatrist before.

PROCEDURES AND MEASURES

Upon arrival at the seminar room, participants were informed they were taking part in a study of psychiatric decision making. They were told that after viewing the videotape, they would be asked to fill out a short questionnaire which contained items that required them to make various decisions about what they had seen and to give information about their backgrounds.

The participants were asked to make an official diagnosis from the third edition of the Diagnostic and Statistical Manual of the American Psychiatric Association. The diagnosis was coded as follows: 1 for bipolar disorder: general; 2 for bipolar disorder: manic; 3 for bipolar disorder: depressed; 4 for personality disorder; 5 for paranoid schizophrenia; 6 for depressive disorder. The participants were asked to rate the consumer's severity of impairment on a 7 point scale as follows: 1 for no mental disorder; 2 for possible mental disorder; 3 for mild impairment; 4 for moderate impairment; 5 for marked impairment; 6 for severe impairment; 7 for among the most extremely ill.

In the next part of the questionnaire the participants were asked if they thought the consumer was treatable, if they thought the consumer could have made responsible decisions regarding his treatment, and if they thought the consumer would inflict severe emotional injury on those unable to avoid contact with him. The response categories to these 3 items were coded as follows: 1 for definitely yes: 2 for probably yes; 3 for probably no; 4 for definitely no. The participants were asked what specific treatment or medication they would recommend for the consumer. The responses to this question were coded as follows: 1 for lithium carbonate; 2 for neuroleptics such as haldol or thorazine; 3 for tricyclics; 4 for behavior modification; 5 for psychotherapy. They were asked if they thought the consumer would physically injure himself or others. This was coded 1 for yes and 0 for no.

RESULTS

General Overview and Description of the Data

While some independent variables are measured at an ordinal level, they are, for purposes of analysis, considered to be interval level. Assuming interval level measurement with ordinal level variables does not cause serious statistical or measurement errors [29].

Table 1 displays means and standard deviations for the behavior variables for the total group and medical school subgroups. There are no statistically significant differences between medical school subgroups for any variables. Both universities are combined into one group for purposes of analysis.

TABLE 1. Total Group and Medical School Subgroups: Means and Standard Deviations.

Variable	Total Group			Midwestern Univ.			Southwestern Univ.		
Name	Mean	S.D.	N.	Mean	S.D.	N.	Mean	S.D.	N.
Severity of Disorder	4.458	1.184	48	4.333	1.239	24	4.583	1.139	24
Consumer Treatable	1.688	.512	48	1.708	.464	24	1.667	.565	24
Consumer Responsible Decision	3.208	.617	48	3.292	.550	24	3.125	.680	24
Consumer Hurt Self/Others	8.33	.376	48	.917	.282	24	.750	.442	24
Emotional Harm Others	2.00	.715	48	1.833	.637	24	2.167	.671	24

The majority of participants diagnose the consumer as having a bipolar affective disorder (N=31; see Table 2). Nine students diagnosis the consumer as having paranoid schizophrenia while six others diagnosis the consumer as having a personality disorder. In terms of medication, the participants tend to prescribe lithium carbonate (N=25) or a neuroleptic such as thorazine, mellaril, haldol, or prolixin HCL (N=14).

TABLE 2. Percentage Distributions of Diagnosis and Medication Decisions by Consumer's Education and Occupation.

Variable Name	Consumer's Education Low	Consumer's Education High	Consumer's Occupation Blue Collar	Consumer's Occupation White Collar
Diagnosis				
Bipolar Disorder: General	26.1	16.7	13.0	29.2
Bipolar Disorder: Manic	30.4	33.3	34.8	29.2
Bipolar Disorder: Depressed	8.7	16.7	17.4	8.3
Personality Disorder	13.0	12.5	17.4	8.3
Paranoid Schizophrenic	17.4	20.8	17.4	20.8
Depressive Disorder	4.3	0.0	4.2	0.0
	(LAMBDA = 0.0)		(LAMBDA = 0.0)	
Medication				
Lithium Carbonate	54.2	50.0	58.3	45.8
Neuroleptics	25.0	33.0	20.8	37.5
Tricyclics	8.3	4.2	4.2	8.3
Behavior Modification	4.2	4.2	8.3	0.0
Psychoanalytic Therapy	8.3	8.3	8.3	4.2
	(LAMBDA = 0.0)		(LAMBDA = 0.0)	

N = 48

The participants definitely think that the consumer is treatable ($\bar{x} = 1.688$) and that the consumer is probably not capable of making responsible decisions with respect to his hospitalization and treatment ($\bar{x} = 3.208$; see Table 1). The participants think that the consumer has a definite mental disorder ($\bar{x} = 4.458$) and that he is likely to physically injure himself or others and cause severe emotional harm to those who are unable to avoid contact with him.

Test of Hypotheses

The results do not support hypotheses one and two. An examination of the lambda coefficients in Table 2 indicates that knowledge of a psychiatrist's perception of a consumer's occupation and level of educational attainment does not improve our ability to predict a consumer's diagnosis. Hypotheses three and four are also not supported. Knowledge of a psychiatrist's perception of a consumer's occupation and level of educational attainment does not improve our ability to predict medication decisions.

The lack of relationships between diagnostic and medication decisions with a consumer's social characteristics serves as further support for the viability of the psychiatric position toward consumer satisfaction with health services. The question remains of the overall and separate impact of psychiatrist's perception of a consumer's behavior versus their perception of the consumer's status resources on diagnostic and medication decisions. In order to address this question the next section of the results presents each of the sets of variables separately and combined into a full model regressed on the diagnostic and medication decisions.

REGRESSION ANALYSIS OF INDEPENDENT VARIABLES ON DIAGNOSTIC AND MEDICATION DECISIONS

In order to qualify for inclusion in any model, the independent variable has to correlate with the dependent variables at .10 or better, not correlate with any other independent variable above .50, or be a status resource variable.

The matrix of zero-order correlation coefficients indicates that a total of five behavioral variables qualify for inclusion in the models. The behavioral model for the diagnostic decision is comprised of the variables of whether the consumer will cause emotional harm to those unable to avoid contact with him, whether the consumer can make a responsible decision regarding his treatment and hospitalization needs, and the severity of the consumer's disorder. The behavioral model for the medication decision is comprised of the variables of whether the consumer is treatable, the severity of the consumer's disorder, whether the consumer can make a responsible decision regarding his treatment and hospitalization needs, and whether the patient will physically injure himself or others. The status resource model is comprised of the education and occupation variables.

Table 3 presents three models regressed on the diagnostic decision. An important finding from the regression analysis employing the full model is that the behavior variables are the most powerful predictors of the consumer's diagnosis and the status resource variable of occupation is the least powerful predictor. Psychiatrists focus on the emotional harm that a consumer will cause others, the inability of a consumer to make a responsible treatment decision, and the severity of a consumer's disorder when they make a diagnosis.

TABLE 3. Standardized Coefficients for Stepwise Regression of Three Models on Diagnostic Decisions.

Independent Variables	Full Model	Status Resource Model	Behavioral Model
	Beta	Beta	Beta
Emotional Harm	.286		.278
Responsible Decision	.397		.383
Severity of Disorder	-.262		-.265
Education	.097	-.030	
Occupation	-.032	.054	
Multiple R =	.432	.062	.419
R^2 =	.186	.003	.176

N = 48

Comparing the two reduced models in terms of their ability to explain variation in psychiatric diagnoses, it is clear that the behavior model (R^2 = .176) explains more variance than the status resource model (R^2 = .003). In terms of the relative effects of each independent variable in the reduced models, whether a consumer can make a responsible treatment decision is the most important predictor of diagnostic decisions in the behavior model. The perception of a consumer's occupation is a better predictor of diagnoses than the perception of a consumer's education.

We find a similar pattern of results when we examine medication decisions in Table 4. Table 4 presents three models regressed on the medication decision. It is clear that the behavior variables are a better predictor of psychiatric medication decisions than the status resource variables. Psychiatrists base their medication decisions on their perceptions of the severity of a consumer's disorder, how treatable a consumer is, and whether a consumer can make a responsible decision regarding his treatment. When we examine the reduced models we see that the behavioral model (R^2 = .248) explains more variance in medication decisions than the status resource model (R^2 = .002). In terms of the relative effect of each independent variable on medication decisions in the reduced models, the psychiatrists perception of the severity of the consumer's disorder is the single best predictor of medication decisions. The psychiatrist's perception of a consumer's occupation is a better predictor of medication decisions than their perception of a consumer's education, even though these effects are extremely weak.

TABLE 4. Standardized Coefficients for Stepwise Regression of Three Models on Medication Decisions.

Independent Variables	Full Model	Status Resource Model	Behavioral Model
	Beta	Beta	Beta
Severity of Disorder	-.250		-.252
Treatable	.238		.230
Responsible Decision	-.222		-.214
Hurt Self/Others	.071		.059
Education	.047	.027	
Occupation	-.033	.041	
Multiple R =	.501	.050	.498
R^2 =	.251	.002	.248

N = 48

DISCUSSION

The stepwise regression analyses demonstrate no support for labeling theory but does lend support to a psychiatric position regarding consumer satisfaction with psychiatric health services. The social characteristics of a consumer do not effect psychiatric diagnostic and medication decisions. These decisions are effected by the psychiatrist's perception of the consumer's actual behavior. In contrast to much previous research, the present study indicates that psychiatrists are adopting a more consumer oriented approach in their decision making. This approach should generate more service satisfaction among health care consumers.

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FINANCIAL COUNSELING: EXPLORING AN INTEGRATION WITH FAMILY THERAPY

Mary J. Stephenson, University of Maryland[1]

ABSTRACT

The purpose of this presentation was to examine the feasibility of the inclusion of family finance in the training of family therapists.

Families are experiencing high divorce rates, increased drug abuse and violence as well as rising financial difficulties. In coping with these problems many are seeking assistance from professionals such as family therapists and financial planners. Though family therapists generally have extensive training in therapeutic techniques they often lack the necessary tools to provide assistance in the technical area of finance (Foster & Allen, 1982). Conversely, financial planners are educated to work with the economics of family life but often lack the skills to deal with the interpersonal dynamics of families (Brandt-Erichsen, 1982). With this in mind, faculty at an eastern university have been investigating the possible integration of family therapy and financial planning through their Family Service Center.

The Family Service Center is a training and research arm of the University which enables graduate students in family therapy and their faculty, clinical experience with families. The faculty of the Center is currently experimenting with an integration of financial counseling with family therapy based upon the following principles (Hayden, 1982):

- Personality characteristics and family interaction influence family financial planning.
- Families should be actively involved in drawing up the financial plan designed to meet their goals and objectives.
- Financial planning is an on going process and in need of revision throughout the life cycle as the needs and dynamic interactions of the family change.

The process of integration at the University is three stage. In the first stage, which is currently underway, a family therapist and financial counselor are meeting jointly with client families. Meetings are video taped and reviewed in order to design the program. The second stage encompasses the development and incorporation of the financial curriculum into the training of graduate students enrolled in family therapy. These students will be supervised as they practice their skills in counseling client families in the third stage.

Materials displayed at the poster session were:

- Photos of facilities at the Family Service Center.
- Proposed curriculum and teaching materials.
- Financial forms used at the Family Service Center.
- Format of the integrated counseling procedure.

Through this presentation the author established the workability of the integration of family therapy and financial planning in a university setting. The sharing of ideas and suggestions from professionals interested in the topic was very useful in the development of the program.

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CONSUMER CONCERNS AS VIEWED BY CONSUMER JOURNALISTS

Mary-Beth Kuester, Consumer Communications Resources, Inc.[1]
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ABSTRACT

In 1977, a questionnaire was sent to 483 "consumer editors," (a census, not a sample), the total number of such journalists listed nationally in Working Press of the Nation. In 1983 a mailing was sent to the current list of consumer editors, same source, now totaling 575. The updated study was undertaken to provide a basis for assessing changes in consumer issues and the importance of the consumer movement as seen by these professionals selected as key informants who are leaders in communicating the thrust of consumer issues.

The broad objectives of the original study were:

1. to formulate an indication of current consumer concerns and their relative importance;

2. to elicit some measure of the degree of confidence held by these consumers for the effectiveness of the federal agencies currently moderating activities in their respective areas; and

3. to identify new trends that were developing in the movement.

In addition, a fourth objective: to provide a basis for comparison of the changes in concerns of consumers as viewed by consumer journalists since 1977, the original study, and 1983.

To facilitate comparison, the original survey content was included in the update study.

Questions were added to address topics of concern at the present time that were not issues in 1977 including interest rates, unemployment, deregulation of financial institutions, inflation etc.

Results: copies of findings of the 1983 study can be obtained by writing Mary-Beth Kuester, Consumer Communications Resources, Inc., P.O. Box 232, Madison WI 53701.

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CURRICULUM SOURCEBOOK: FAMILY FINANCIAL MANAGEMENT

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ABSTRACT

The Sourcebook is to serve as a resource for Cooperative Extension staff in state and county offices to define, deliver, and evaluate nonformal adult-education programs in family financial management. It includes an outline (with rationale for significance), educational resources, current data and statistics, related research, and priorities for the decade, with relevant evaluation strategies.

USDA funded a special-needs project to assist agents and specialists in developing and delivering programs to improve financial-management practices of Extension clientele. An advisory committee of eight Extension specialists and three USDA staff worked with the project.

Within Extension Home Economics, there has been a growing awareness of the need for a more concrete definition of the role of Cooperative Extension in helping families with economic problems.

The Sourcebook is not to be the curriculum to be followed for the period of 1983 through 1991, but rather an outline and rationale for the kind of financial-management program which can be presented in a county or state.

CONTENT OF THE SOURCEBOOK

The Sourcebook is in five major parts. Each part can stand alone or be used in conjunction with other parts.

The Outline

The outline, developed with help from the advisory committee, has three major parts: Financial Management; Regulation, Market Conditions and Public Policy; and Family Resources. There are approximately 130 concepts within the outline. For each, a statement of rationale relative to the significance of the numbered concepts in financial management for families is included. Concepts may be repeated in each of the three sections.

Resources

Recommendations for resources for teaching and/or clientele use were solicited from Extension specialists in all states. Approximately 160 resources were recommended for review. The advisory committee members reviewed materials, using the following criteria: Usefulness to Extension programs, Focuses clearly on objectives, Accuracy of information, Technical quality, Ideas for programs, Free from bias (Affirmative-action program). Each resource is rated as to excellence by the reviewer. Resources are identified by concept number in the outline. Some resources included were not reviewed.

Data

Agents, in particular, may find that they do not have current information for teaching. This section includes current statistics/data (approximately 40 types) for use in teaching. In addition, sources of data for updating the statistics are included. Each is also reported by the outline concept number.

Research

Approximately 110 research articles are abstracted in the Sourcebook. They are reported by outline concept number.

Priorities

Extension specialists from all states were asked to identify program priorities for the decade. The advisory committee developed three major priorities for the decade, which reflect the priorities suggested from the states. They are: To improve family management skills to maximize and extend income to cope with changing family circumstances and economic conditions; to develop family skills to use technology to conserve, use, and manage family financial resources; and to develop family skills in identifying the constraints and influences that government places on consumers in selection of housing, food, clothing, and transportation, among others. Evaluation strategies for each priority are included.

General References

The final section identifies agencies producing useful resources. Other general-references information of value in development and delivery of family financial-management educational programs is included.

County and state Cooperative Extension offices will have access to the Sourcebook at no cost. The Sourcebook was available in April, 1983.

ELDERREACH
ELDERLY OUTREACH AND CONSUMER EDUCATION
(A REPORT ON A JOINT TRAINING PROJECT)

Rosalie Powell, University of Wisconsin Extension[1]
Shirley Swasey, Waukesha County Technical Institute[2]

This pilot project established a volunteer training program utilizing senior citizens (sixty years and older) to reach homebound elderly adults and/or socially disadvantaged countywide. Working as an outreach component of the Waukesha County Department of Aging, these trained volunteers provide information and referral as well as direct consumer education assistance to elderly persons.

The county Department of Aging requested and accepted the joint proposal to develop a training program for volunteers to work with an outreach program called Eldereach. Planning and implementation of the initial intensive two day training workshop and subsequent in-service sessions were accomplished through a joint effort of the Waukesha County Technical Institute and Waukesha County University of Wisconsin - Extension.

Thirteen volunteers selected to be trained were identified through the cooperation of several senior citizen agencies in the community. The intensive workshop session sought to address the complicated problems of the homebound older adult. An overview of consumer and economic concerns, insurance supplements to Medicare, Homestead Tax Credits, Medicare changes and forms, and availability of Title 19 funding were the consumer areas addressed. Additionally, presentations by county referral agencies such as Social Services, Mental Health, Para-legal Services, Visiting Nurses and Victim Assistance, identified resources available to the volunteers for information or further referral. Communication skills were also part of the workshop format with an emphasis on self assessment and the establishment of helping relationships. Although not trained in counseling techniques, the volunteers were encouraged to develop positive communication skills to use with potential clientele.

During the initial training and subsequent in-service sessions, resources for volunteers and materials used with clientele were organized into a portable filing system. Each file box was fitted with dividers in the following categories: Notes, Health, Insurance, Medicare, Policies and Procedures, Resources, Social Services and Taxes. Additional dividers were supplied for future use. Resources were distributed and allocated to specific categories for storage. A master file was retained for future file duplication.

After training, volunteers were asked to rank subject matter they found most-to-least useful. Rankings for the subjects in decreasing order included: Title 19 information, Communications, Insurance (Medicare Supplemental) Medicare, Taxes and Income, Health and Housing. Twelve of the thirteen volunteers indicated that the workshop did identify economic problems faced by the elderly.

Eight additional in-service programs that addressed specific problems encountered by volunteers in the field were designed and implemented during the nine months following the initial training. Upon termination of the pilot project, results with conclusions and recommendations were accepted by the County Department of Aging and were so well received that the project with additional in-service time budgeted, was refunded for 1983.

In this era of decreased funding and an increasing older population, it is crucial to utilize volunteers as a resource for services to the elderly. However, in order for a program to be effective, volunteers must be trained to understand the needs of the clientele they are serving and have expertise in the services they are offering. Properly trained volunteers can become a valuable asset to any service providing agency. This project, unique in its sharing of responsibilities between the two educational agencies and other community resources, could serve as a model for other groups and agencies. A complete report, Eldereach Training, including background, budget details, timetables, program schedules, resource materials, and evaluation can be obtained from project co-directors: Shirley Swasey, WCTI, 800 Main Street, Pewaukee, WI 53072, Rosalie Powell, U.W. Ex., 515 W. Moreland Blvd., Waukesha, WI 53186

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CONSUMER EFFICIENCY: CAN IT BE OBJECTIVELY MEASURED?

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Consumer efficiency is used as a measure of ability to evaluate product quality. An equation developed by Sproles, Geistfeld, and Badenhop[1] measures the deviation of an individual's rank ordering of products from the rank ordering by Consumer Reports:

$$CES_j = \sum_{i=1}^{k} |R_i - C_{ij}|$$

where:

k = number of alternative choices (brands)
CES_j = consumer efficiency score of the j^{th} consumer for a given product set of k choices.
R_i = "Consumer Reports" rating of the i^{th} alternative in the set of choices.
C_{ij} = rating of the i^{th} alternative by consumer j
$\sum_{i=1}^{k}$ = directs the summation of the absolute values over all k alternatives, and is derived from the first of Spearman's Rank Order Correlation

The purpose of the study was to a) identify attitudinal and behavioral factors which are related to consumer efficiency, and b) compare consumers' perception of their ability to evaluate product quality with their demonstrated efficiency. Data from a laboratory study conducted in 1978 at Purdue University were used for the analysis. The study used a random sample of 150 women from Lafayette, Indiana who were over the age of twenty and were not enrolled as students at Purdue University. The subjects were randomly assigned to one of three treatment groups to evaluate slow cookers. Each group was provided with different amounts and types of information. Subjects in treatment one (R_1) used only the products to evaluate and rank product quality. Those in treatment two (R_2) used products and market information, and those in treatment three (R_3) used products, marketing information and extended information. Individuals in each group were directed to select the "best" slow cooker from a display of four brands. A consumer efficiency score was calculated for each subject by summing the differences between Consumer Reports rank ordering of the four slow cookers and the rank ordering by the participant.

Nine null hypotheses were developed to test the relationship between eleven independent and six dependent variables. Three statistical tests were used: X^2, ANOVA, and Pearson's r. One null hypothesis was rejected ($p \leq .05$): the type of information respondents based their information on is not dependent upon treatment. There was a trend for the source of information used to change as the amount and type of infomation available increased. In R_2 the tendency was to rely more heavily on product examinations in order to rank order the products. In R_3 the trend was for subjects to rely on the information cards or a combination of informational cards and product examinations as a basis for product evaluations. An important supportive observation was that levels of Consumer Efficiency were evenly distributed among treatment groups. Contrary to theory, the amount of information subjects were provided had no significant effect on their level of consumer efficiency. None of the subjects receiving perfect efficiency scores (i.e. CES= 0; n= 4) were members of R_3.

From the findings, it is concluded that:

* Consumer's, give different weights to objective/technical information than Consumer Reports.

* The even distribution of consumer efficiency scores could be attributed to the existence of a variable or set of variables which was not controlled for or indentified in measuring the level of consumer efficiency.

In a pilot study (student sample), subjects were found to be more efficient as they were exposed to increasing amounts of information. Those who were more efficient used combinations of product, market, and extended information. Since students are more comfortable with a laboratory/testing situation and have been trained to use objective/technical information to select products their product rankings are more likely to be similar to those of independent testing organizations than are the rankings of average consumers. Consequently, using Consumer Reports rankings as the sole measure of consumer's efficiency will continue to provide an inaccurate assessment until the general population has the opportunity to develop attributes which are similar to those of the student population. Hence, a new measure of consumer efficiency is proposed which allows the individual to rank the products based upon personally weighted criteria[2]:

$$CES_i = \sum_{k=1}^{n} \left[|I_k - P_{kj}| v_k - |I_k - O_{kj}| v_k \right]$$

where:

CES_i = consumer efficiency score of the i^{th} consumer
I_k = ideal point of attribute k
P_{kj} = amount of attribute k that brand j is perceived to possess
O_k = objective rating of attribute k that brand j possesses
v_k = perceived importance of brand possessing the desired amount of attribute k
n = number of attributes relavent to preference of brand in product category
$\sum_{k=1}$ = directs the summation of the absolute values over all k

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[1] Sproles, Geistfeld, Badenhop. "Types and Amounts of Information Used by Efficient Consumers". Journal of Consumer Affairs 14(Summer 1980): 37-48

[2] Adapted from — Winter "The Effect of Purchase Characteristics on Postdecision Product Reevaluation". Journal of Marketing Research 11(May,1974):164-171

SHAPING A NATIONAL CONSUMER EDUCATION INSTITUTE

Rosella Bannister, Eastern Michigan University[1]

ABSTRACT

A National Consumer Education Institute would serve as a catalyst to promote strengthened leadership, cooperation and communication among those educators, government, business, labor and community groups engaged in consumer education. The Institute would encourage networking and promote a multidisciplinary approach to consumer education. Consumer leader response to an Institute proposal was generally positive, with caution expressed regarding funding and governance.

A NATIONAL INSTITUTE PROPOSAL

In November 1982, a proposal entitled The National Consumer Education Institute: Purpose, Funding Structure, Functions and Activities, was circulated by Hayden Green, author and teacher, Rosella Bannister, Michigan Consumer Education Center, and Lillian Mohr, U. S. Office of Consumer Affairs.

FUNCTIONS

1. Maintain a library resource center, clearinghouse, and referral service.
2. Evaluate, publish, and disseminate consumer education materials.
3. Augment existing consumer education activities of schools, community organizations, business and government agencies.
4. Conduct or contract teacher training seminars and conferences which promote a multidisciplinary approach to consumer education.
5. Conduct or contract seminars and conferences for adult and community consumer educators.
6. Promote, conduct and disseminate consumer education research.
7. Encourage the development of regional academic centers for consumer education.
8. Promote the development of state consumer education associations.

FEEDBACK TO DATE

Evaluative comments were received from consumer leaders representing secondary and higher education, ACCI, Coalition, government and business.

The functions were rated excellent or very good by 76% of the respondents. Further clarification of the Institute's activities was called for in order to avoid duplication with existing organizations.

The issue of corporate dominance was raised. Forty-two percent of the respondents felt that the proposed funding and governance plan was fair or unsatisfactory. One said, "More attention needs to be given to balancing representatives of consumer, education, government and business interests on the governing board."

Figure 1: How Consumer Leaders Rated the Components of the Institute

	Excellent or Very Good	Satisfactory	Fair or Unsatisfactory
Functions	76%	8%	16%
Funding and Governance	39%	19%	42%
Activities	75%	25%	0%

Priority Functions

Respondents ranked the priority functions:

#1 -- Resource Center, Clearinghouse
#2 -- Teacher Training, Conferences
#3 -- Networking, Regional Centers
#4 -- Research
#5 -- Augment Existing Activities

Affiliated Centers

Thirteen respondents indicated interest in considering the establishment of an affiliated regional Center at the following universities:

University of Arizona
University of Baltimore
Colorado State University
University of Connecticut
Eastern Michigan University
Howard University, DC
University of Kentucky
Northern Illinois University
Southern Illinois University
University of Minnesota
University of Missouri
Purdue University
University of Vermont

NEXT STEPS

1. Revise and refine the proposal based on feedback and continuing dialogue with consumer leaders.
2. Enlist the support of a broad range of consumer educators.
3. Appoint committees to develop proposals to fund specific components of the Institute.
4. Establish the Institute in cooperation with existing organizations, affiliated Centers and networks.
5. Initiate and promote programs and services.

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[1] Director, Michigan Consumer Education Center

FOR FURTHER INFORMATION: Michigan Consumer Education Center, EMU, Ypsilanti, MI 48197 313/487-2292.

AN EXPERIMENTAL STUDY OF CONSUMER FOOD LABEL USE

Joel Rudd, University of New Hampshire[1]
Nancy Finch Turner, University of New Hampshire[2]

ABSTRACT

This paper describes a repeated-measures experiment designed to assess the effectiveness of various nutrition label formats currently under consideration by the Food and Drug Administration and the U.S. Department of Agriculture. The experiment will present consumers with information on several foods in one of the label formats and ask them to make a number of purchase decisions. Four information exposures, one week apart, will be utilized. Consumer effectiveness will be measured by the nutritional quality of the purchase decisions, the amount of time taken, and the level of satisfaction with the label format.

BACKGROUND

It has recently become clear that the current nutrition label format is less informative and less useful to consumers than had been hoped when it was implemented by the Food and Drug Administration (FDA) in 1975 [1, 2]. Not only do relatively few consumers report regular use of the label, their effect is often to confuse and frustrate rather than to enlighten consumers.

The FDA and the Department of Agriculture (USDA) are in the process of revising the current nutrition labeling system. A number of revised label formats have been designed and are ready to be consumer tested [2]. The FDA/USDA research plan and an invitation for additional, parallel consumer research has been issued [3]. The research outlined in the present paper is an example of such parallel consumer research.

OBJECTIVE

It is important to test the proposed nutrition label formats prior to implementation [3]. The revised label should be easy for consumers to understand and use. It should provide consumers with the information they want and need in a way that is not confusing or misleading.

The purpose of this paper is to briefly describe an experiment designed to test the relative effectiveness of the proposed label formats. The results of this experiment, along with others, will be used to determine which label formats should be market-tested [3].

DESIGN

A 2 x 6 x 4 between-within analysis of variance design is proposed. The between-subjects variables are (1) Food Group Information (present, absent) and (2) Nutrition Label Format (current plus five proposed). The within-subjects variable is Time (four presentations, one week apart).

The Food Group Information variable is operationalized by including, for half the subjects, a short statement on the label identifying the food group to which the labeled food belongs (Grain, Dairy, Fruits/Vegetables, Meat). The intention here is to measure the effect of a direct link between a classic consumer nutrition education tool, the Four Food Groups, and provision of simple Food Group identification statement on the nutrition label.

The Nutrition Label Format variable consists of six alternative nutrition label formats. All six stimulus labels include serving size and number of calories per serving. The labels vary in the format (numerical, verbal, graphic, and graphic nutrient density) in which macro- and micro-nutrient information is displayed (see Figure 1).

The Time variable will enable us to measure the effect of "learning" or familiarity on the effectiveness of consumer use of the nutrition label information. In all cases, subjects will be presented with nutrition label information in the same format at one-week intervals.

FIGURE 1. The Six Nutrition Label Formats.

Label	Macro-Nutrients	Micro-Nutrients
1	Numerical	Numerical
2	Numerical	Numerical
3	Numerical	Verbal
4	Numerical	Graphic
5	Graphic	Graphic
6	Numerical	Graphic Nutrient Density

Note: Label 1, the current format, lists eight micro-nutrients; Labels 2-5, the proposed alternatives, list four micro-nutrients. Labels 2-5 also.

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AMERICAN HOUSEHOLDS--VICTORS OR CASUALTIES IN AN INTERNATIONAL TRADE WAR?

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Abstract

There are three main themes in this paper. The first is a brief look at households, consumers, and the role that international trade plays in their economic life. The second is a discussion of what trade wars are and how they differ from ordinary trade problems and protectionism. Third is a series of rough estimates of how a plausible trade war scenario might unfold and affect U.S. households. A few conclusions and implications round out the paper.

Pick up any recent issue of The Wall Street Journal, Newsweek magazine or your local newspaper. The chances are very good that you will see at least one story about today's international trade problems. Lurking someplace in most of these articles will be the term "trade war." That is what this paper is mostly about--"trade wars" and their impact on U.S. consumers and households.

There are three main themes in this paper. The first is a brief look at households, consumers, and the role that international trade plays in their economic life. The second is a discussion of what trade wars are and how they differ from ordinary trade problems and protectionism. Third is a series of rough estimates of how a plausible trade war scenario might unfold and affect U.S. households. A few conclusions and implications round out the paper.

HOUSEHOLDS, CONSUMERS, AND TRADE

International trade bulks large in the U.S. economy. Exports are about 8½% of our annual gross domestic product (GDP) and imports are a bit over 9% [1, 4]. In comparison, Japan, a nation we view as highly dependent on trade, exports merchandise and services equal to 11% of her GDP and imports an approximately equal amount. West Germany exhibits export and import percentages of GDP amounting to 22% and 21%, respectively. Incidentally, GDP is a measure of economic activity that is closely related to the more-familiar gross national product (GNP). However, GDP is more suitable for cross-country comparisons.

Like numerous other nations, United States' dependence on trade as a source of economic activity has been growing. In 1950-51, exports and imports amounted to only 4% and 3% of GDP, respectively, compared to 8½% and 9% today [1]. Consequently, trade and trade policy have become increasingly relevant to the people and businesses of this country. The strength or weakness of our trade sector is a powerful determinant of employment, prices, production, and growth.

In addition, our trade and trade policy is very important to other nations and their people. The United States accounts for about 13% of all world trade [4]. No other single nation, with the exception of West Germany, comes anywhere near this amount. Therefore, the United States has, since before World War II, been a dominant force in setting the tone for international trade relations. We are the nation to which the rest of the world looks for leadership and direction. No really important or widespread change in the tenor and process of world trade can occur without the United States being a party to it--either actively or passively.

Table 1 is a brief profile of recent U.S. exports and imports. The pure theory of international trade suggests that nations will export those items for which they have a comparative advantage (can produce most efficiently) and will import those items for which they have a comparative disadvantage (can produce least efficiently). On this basis, the table 1 data suggest that we exhibit a net comparative advantage in food and agricultural products and capital goods. Our comparative disadvantage seems to be in consumer and automotive products and, of course, petroleum. (The latter averaged 58% of total industrial supply imports in 1980 and 1981.) Although the U.S. economy and its trade sectors are too large and complex for this simple characterization of comparative advantage to be very precise, these overall tendencies are clear.

TABLE 1. Profile of U.S. Exports and Imports, Average 1980 and 1981.

Item	Exports	Imports
	(percent of total)	
Food and agricultural products	16	7
Industrial supplies	30	53
(petroleum)		(31)
Capital goods	34	13
Automotive products	8	11
Consumer products	7	15
Other	5	1
Total	100	100
Average annual value (billion $)	$226	$252

Source: Survey of Current Business, U.S. Department of Commerce.

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Consider international trade in relation to the household. Economists observe that society is organized into units of one or more people who live together as households. These units engage in two major economic functions in relation to the rest of society. They purchase goods and services for their own use, and they provide human services and other productive assets to the economy at large. More simply, they buy things and they hold jobs. It is on these two crucial economic functions that a nation's international trade most directly impinges.

Effects on Consumers

The array and prices of goods and services faced by households can be much different with international trade than without it. For the most part, trade makes available more abundant supplies and a more diverse selection of products than does self-sufficiency. (Self-sufficiency is sometimes called "autarky" by trade theorists.) Because sellers of domestic products face international competition for their markets, prices are generally lower than otherwise, both for products which are imported and, in the case of imported raw materials and intermediate goods, for further processed goods. Households, as consumers, clearly are benefitted by this aspect of international trade. Strictly consumers, people always should find it in their best interest to resist policies which increase tariffs, reduce import volumes, or otherwise penalize imported goods in the market place.

However, there is another side to the consumer's view of foreign trade. The immediate effect of an increase in a country's exports may be to stint domestic markets and to increase local prices of export goods. In the case of exported raw materials, prices of products which use these raw materials in further processing may be pushed up. This occurs because domestic buyers find themselves in vigorous competition with eager foreign buyers. When these changes occur suddenly, as they do in agricultural and many other raw material markets, consumers and their representatives may find themselves supporting export embargoes, export taxes, and similar efforts to shunt products into the domestic economy that otherwise would be exported.

Here are some general propositions that virtually all economists would agree with. International trade makes available to consumers a larger and more diverse bundle of goods and services at lower overall prices than does autarky. Compared with autarky, prices of imported goods and their domestic counterparts will be lower. Prices of exported goods may be higher. However, consuming households with specific incomes to allocate will be able to achieve more satisfaction from those incomes in the presence of trade than in its absence.

Effects on Employment

From the household's viewpoint, the effects of international trade on consumption decisions and expenditure allocations are rather straightforward. The hard part is to analyze its effects on jobs and incomes across the economy. In what follows, we will emphasize the employment effects of changes in trade flows.

The elegant and timeless theory of international trade presumes that people and productive resources can move from sector to sector and job to job smoothly and easily in response to changes in economic signals and opportunities. In such a well-oiled world, people and capital are always fully employed. Industries which are technically efficient and whose output is in world demand set the standards for wages, rents, and dividends that all employers, large and small, must meet.

Alas, the real world is not so neatly constructed. As economic and technical changes occur both at home and abroad, it is inevitable that old patterns of comparative advantage and relative efficiency will erode and new ones will evolve. Then, previously strong domestic industries may find themselves facing heavy competition from imports. New industries may spring up or others may begin expanding to meet new international demands. These are clear signals for economic adjustments.

In industries and sectors under strong import competition, firms may be forced to cut back output, lay off workers, and accept lower returns. In the long-run, firms may even have to close down. The survivors will become more efficient. For the people involved, managers and workers alike, this is a difficult and painful business. For immobile people with highly specialized skills and for plant and equipment with few alternative uses, there may be virtually no choice. Such capital will continue to be used even at low returns until it wears out, and the people will live with unemployment and despair.

It is not surprising that industrial leaders and their representatives seek protection from imports and onerous adjustments when their traditional markets are threatened. It is this search for protection that lies behind much, but not all, of the trade war threat that we will discuss later. However, to accuse adversely affected groups of selfishness, greed, or shortsightedness when they seek protection is to be naive about the real problems of economic adjustment.

Jobs lost to import competition are not often similar to those that open up in other industries, nor are they usually located in the same geographic areas. The presence of recession and generalized unemployment throughout the economy, as today, aggrevates this picture even further. These factors clog and slow down the flow of people and other productive resources away from troubled, inefficient sectors to expanding, efficient ones. There is no general proposition on the employment side that suggests whether or not households are benefitted or hurt by changes in international trade. It all depends on who and where they are. For the economy as a whole, aggregate income and output are higher with more trade than with less trade. But it is a mixed blessing.

These then are two main economic effects that trade brings to households. We ignore the possibility that the household's taxpaying role is significantly affected by either (a) government costs of adjustment assistance to displaced workers, unemployment benefits, and export subsidies, or (b) government revenues from import tariffs or export taxes.

THE ECONOMICS OF A TRADE WAR

Despite strong theoretical arguments about the broad benefits of freer trade, its application will impose hardship on some industries and people. Those affected often argue successfully for specific protection against the full force of international competition. These deliberate actions include tariffs, import quotas, domestic content regulations, packing and labeling requirements, sanitary restrictions, variable import levies, export controls, export subsidies, and so on. This web of specific government decisions is a nation's trade and commercial policy.

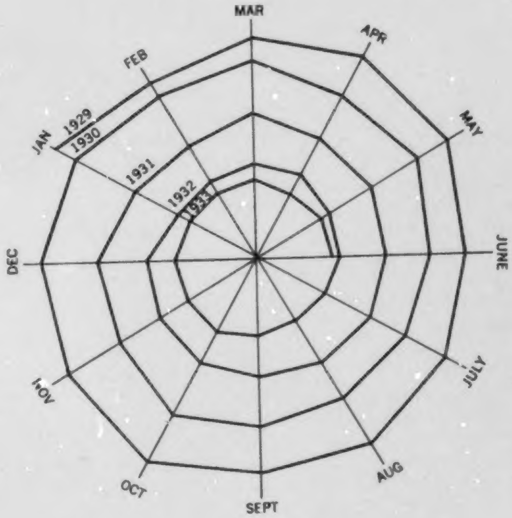
The main reason that such a protective web evolves within every nation, is because the large benefits of additional trade are spread widely and thinly among numerous consumers and vigorous industries, but the costs and hardships, although smaller in total, tend to be focused on relatively few workers and firms. These few usually can articulate their problems clearly and press for help.

In times of growing prosperity and economic expansion, protectionist sentiments shrink and trade expands. In times of recession and general unemployment, protectionist sentiments intensify and spread. In such times, serious new efforts by trading nations to restrict imports or artificially expand exports can set off a chain reaction of retaliation by trading partners that can be called a trade war.

When one nation retaliates against another in a trade war, the reprisal falls on sectors other than the one which gained from the first protective action. The industries that take the counterblows are selected by the retaliator. These are export industries and are generally among the most efficient in the country. So more jobs are lost and resources idled than were saved in the first instance. Because the hallmark of a trade war is reaction and retaliation, inefficient industries are subsidized and efficient ones are punished all over the trading world. National income, employment, and output will tend to fall in trade warring nations. Prices in relation to income will rise, especially for imported goods and their domestic counterparts, and the selection of available products will dwindle.

As with most any war, it is difficult to know who actually fires the very first shot. Yet once begun, a trade war, like any war, can feed upon itself. For instance, one reason that international trade volume was cut in half in the early 1930's is that depression-induced tariff increases by the United States were met by retaliatory tariff hikes from other nations. This led to another round of increases, and so on. This action and reaction strangled world commerce, intensified the Depression, and heightened international distrust prior to World War II, figure 1.

FIGURE 1. The contracting spiral of world trade (Source: League of Nations, "World Economic Study, 1932-3," Geneva, 1933, page 8)



A TRADE WAR IN THE 1980's?

Nobel Prize winning economist, Paul Samuelson, once stated two fundamental laws of economics. They are (1) economists cannot predict the future with accuracy, and (2) neither can anyone else. Hence, we cannot know whether or not a full-blown trade war will break out in the 1980's, or ever. However, the background conditions are becoming more and more ominous especially between the United States and its main industrialized trading partners. These conditions here in the United States include:

1) Widespread economic recession and unemployment.

2) Especially high unemployment in such import-competing industries as steel, automobiles, and related sectors.

3) Low farm prices and incomes caused partly by slumping exports.

4) A relatively strong dollar in international markets making U.S. exports look expensive to foreigners and foreign imports look attractive to U.S. buyers.

5) Unhappiness among U.S. politicians, policymakers, and private interests about export and import trade policies of other nations which appear to be unduly protectionist and "unfair" to U.S. interests.

Numerous trade bills are now either in process or in preparation for this session of Congress. Some of the most notable involve minimum domestic content for various imported products, reciprocity in applying tariffs or import quotas to individual foreign exporters, general and specific agricultural export subsidies to offset similar subsidies by competitive exporters, and a bundle of protective measures for particular products and sectors under heavy competitive pressures. Passage of any of these bills could be the first clear shot in a trade war that could spread rapidly from product to product and country to country.

For purposes of argument and analysis, let us envisage a new series of actions and retaliations in trade policy here and abroad that reduce U.S. foreign trade by 25% in a relatively short time. Both imports and exports fall by this amount. Assume that the relative impact across products and industries is constant at 25%, and no other changes occur to muddy the water. Tariff, import quotas, and other similar measures are used by the warring trade partners.

To trace the effects of such a trade war, we use the empirical analysis of Alan V. Deardorff and Robert M. Stern in their 1979 report, An Economic Analysis of the Effects of the Tokyo Round of Multilateral Trade Negotiations on the United States and Other Major Industrialized Countries [2]. This report presents extensive tabular and text material on how recently negotiated, international trade concessions affect U.S. prices, employment, and economic welfare across the whole economy.

Much of the following discussion hinges on manipulations and extrapolations of the Deardorff and Stern estimates. However, those authors have neither endorsed nor even commented on this particular use of their research results. The main purpose here is to illustrate the general directions of change that could occur and to provide some idea of the approximate magnitudes. Readers interested in the specifics of the model's construction, estimation, and solution are referred to the original report.

Deardorff and Stern (DS) proceeded by identifying negotiated changes in trade barriers by the United States and several other trading nations and then solving their multinational model for changes in exports, imports, employment, and prices under both fixed and flexible exchange rates across tradeable goods sectors, non-tradeable sectors, and the whole economy. For this paper's analysis, an across-the-board 25% drop in both exports and imports was asserted. Resulting changes in employment and prices were estimated from the published tables under a flexible exchange rate regime.

Changes in Employment

Our hypothetical trade war has significant sectoral impacts on employment. As trade falls, employment tends to decrease in export-oriented industries and increase in import-oriented sectors. As table 2 shows, the trade war causes a net decrease in employment in the tradeable goods sector of about 400,000 jobs. These people are either forced into jobs in the domestic, non-tradeable sector or into unemployment. According to the DS model, those that move into other jobs go mainly into the retail, wholesale, and personal services sectors. Although the DS model does not measure it specifically, one implication of this rearrangement in jobs is that wages and salaries on average would fall, at least for those pushed into employment outside the tradeable goods sectors.

Within the tradeable goods sector, it is not surprising to find that our hypothetical trade war damages the export industries like agriculture and industrial supplies (machines, chemicals, etc.) but favors those that compete with imports like textiles, wearing apparel, and plastic products. These results suggest that employment in the transport equipment sector falls with a trade war, a somewhat counter-intuitive conclusion. It occurs because, even though the United States imports many foreign automobiles, we export buses, trucks, automotive parts and supplies, as well as some cars, all of which are reflected in the table 2 employment results. See table 1 for the relative impact and export shares of automotive products. Apparently the automotive products we export are more labor intensive than those that we import.

All of the changes indicated in table 2 are estimates. Moreover, they are adjustments that occur strictly in response to an imaginary, trade-shrinking conflict whose effects are evenly distributed across all tradeable goods industries. It is highly unlikely that such an even-handed trade war would unfold. But with the current uncertainty about trade matters in the United States and abroad, it is difficult to create other plausible scenarios that are more likely to occur.

TABLE 2. Estimated changes in U.S. employment caused by a 25% trade-decreasing trade war, by ISIC group[a/]

Sector	Percent change in employment	Change in number of workers
	(percent)	(thousands)
Agriculture, forestry, etc.	-11.3	-372
Textiles	+10.8	+128
Wearing apparel	+ 2.3	+ 27
Footwear	+13.1	+ 23
Industrial chemicals	- 4.2	- 46
Petroleum refining	+18.0	+ 32
Non-ferrous metal industries	+ 9.3	+ 28
Machinery, non-electrical	- 7.8	-177
Transport equipment	- 4.2	- 76
Plastic products, other manufacturing	+ 2.4	+ 31
Other tradeables	--	+ 2
Total, tradeable sector	- 1.8	-400

a/ Specific sectors listed for employment changes greater than or equal to 5.0% and/or 20 thousand workers.

Effects on Prices

A trade war, like ordinary import and export protection, generally pushes an economy away from production reflecting comparative advantage toward that reflecting autarky. These changes will affect prices throughout a market economy like ours. Prices will soften and fall in net export sectors and rise in import-competing industries. Hence, price and production changes will be directly related. The DS model results also can be used to investigate the price consequences of our imaginary trade war.

Table 3 shows the estimated price changes in tradeable goods that occur in response to a 25% fall in exports. As export outlets are curtailed, prices fall for exportable items across the various categories. Notice the very large price decrease for agriculture and forestry export products. This is the result of (a) highly price-inelastic domestic demands for raw and semi-processed agricultural goods and (b) the heavy reliance of U.S. agriculture on export markets. The calculations suggest that price decreases for other export goods are in the 5-7% range or less. Recall, that these figures are approximations made from a study designed for somewhat different purposes. They are presented only as rough guides to the magnitudes involved.

TABLE 3. Estimated changes in indexes of U.S. export prices caused by a 25% trade-decreasing trade war, by ISIC.a/

Sector	Change in export prices
	(percent)
Agriculture, forestry, etc.	-59.7
Food, beverages, tobacco	- 4.8
Wood products, excluding furniture	- 5.1
Printing, publishing	- 4.9
Industrial chemicals	- 6.8
Pottery, china, etc.	- 4.2
Glass and products	- 5.1
Metal products	- 4.4
Machinery, excluding electrical	- 4.4
Electrical machinery	- 5.7
Transport equipment	- 7.1

a/ Sectors listed for price changes greater than or equal to 4.0%.

Table 4 illustrates price changes that our trade war induces in the import goods sectors. New trade restrictions on imported goods create upward price pressures across the affected sectors. The first column in table 4 shows the estimated price changes for the newly-restricted import goods themselves--a relatively short-run view. The second column indicates overall changes in weighted price indexes which contain both imported goods and comparable domestic products. The values in the second column are smaller, reflecting (a) adjustments of producers and consumers toward less-expensive domestic products and (b) the relatively large size of the domestic sector relative to imports. The second-column values are longer-run results.

TABLE 4. Estimated changes in indexes of U.S. import prices and combined indexes of import and home prices caused by 25% trade-decreasing trade war.a/

Sector	Change in indexes of: Import prices	Change in indexes of: Home and import prices
	(percent)	
Agriculture, forestry, etc.	+ 53.1	+25.5
Food, beverages, tobacco	+ 23.0	+ 0.5
Textiles	+ 23.2	+ 1.7
Leather and products	+ 17.7	+ 6.5
Wood products, excluding furniture	+ 14.8	+ 2.6
Printing, publishing	+ 12.8	+ 4.3
Petroleum refining	+233.5	+73.7
Glass and products	+ 16.2	+ 0.8
Iron and steel, basic	+ 17.4	+ 1.4
Non-ferrous metals, basic	+ 22.0	+ 6.0
Machinery, excluding electrical	+ 12.4	+ 1.0
Plastic products, etc.	+ 14.0	+ 6.9

a/ Sectors listed for import price changes greater than or equal to 10.0%.

The import price increases tend to be rather large in response to a 25% hypothetical trade cut. Those for petroleum products and imported food and agricultural products are especially large. In addition, those for many other products and sectors are certainly not negligible. Moreover, we can surmise that, at least in some sectors, the diversity of items available at comparable prices is decreased when imports are substantially curtailed.

A FURTHER EXAMPLE FROM AGRICULTURE

Occasionally, consumer groups propose that agriculture exports be curtailed to help fight upward food price pressures. This usually happens when retail food prices surge ahead of changes in the Consumer Price Index. Some analysis presented by George Hoffman of the U.S. Department of Agriculture sheds light on this issue and corroborates at least some of the results suggested by the DS model [3].

Imagine an arbitrary 25% cut in exports of the three, big-ticket agriculture commodities, corn, soybeans and wheat. Some manipulation of Hoffman's results reveals the price impacts of such a change throughout the agriculture and food system. After a couple of seasons, the full results of this export cut work their way through the crop and livestock sectors and into retail food prices.

On the farm, the prices of corn, soybeans, and wheat would fall almost immediately by 50%, 42%, and 68%, respectively. These grain price decreases then spill over into the livestock sectors. As they do, live-cattle, hog, and broiler prices fall by 22%, 37%, and 40%, respectively. Ultimately, these crop and livestock price changes induce a decrease in the retail food price index. But it is only a 5% drop. Hence, the costs of achieving a modest decrease in food prices by export controls are substantial at farm level.

CONCLUSION

International trade affects households in two main ways. The first is through the markets for goods and services which households buy for consumption. The second is through the labor market which provides employment opportunities and income for household members. Policy-induced trade restrictions affect these markets (a) by making import goods and their domestic counterparts more expensive and less abundant than otherwise, and (b) by protecting jobs and incomes in relatively inefficient import-competing industries and sacrificing jobs in relatively efficient export industries.

The empirical results presented in this paper are drawn from others' research and illustrate these ideas. Their implications are discussed within the context of a hypothetical trade war which slices 25% off all U.S. exports and imports. Although the figures are only approximations, they do support the general propositions about trade restrictions suggested by economic theory.

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CURRENT TRADE ISSUES: A WASHINGTON PERSPECTIVE

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About four weeks ago, David Stockman spoke to a group of journalists. His opening line was "My thesis today is puzzlement." Although I do not intend to speak on the same topic as Mr. Stockman, my thesis also is puzzlement. Puzzlement at the attitude or lack of attitude of consumers and consumer leaders and groups toward international trade issues.

Consumer groups have focused on the problem of international trade in hazardous products, and properly so. They do not appear to have addressed the very important questions of protectionism and trade distortions. I would like, this morning, to discuss these three problems and the importance of fair and open international trade to consumer and citizen alike.

Although you may have already heard the statistical litany about the importance of trade to the United States economy, I believe that it is extremely important and will repeat it.

Since 1960, the combined annual export-import trade of the United States has grown from $35 billion to $507 billion, making us the world's largest trading nation. Even with inflation, that is a truly impressive increase.

Millions of American jobs are export related. Each billion dollars worth of exports represents somewhere between 24 and 35 thousand jobs. One out of five jobs depends in some way on trade. 40% of our cropland is devoted to production for export.

In 1981, United States farm exports were valued at about $43 billion, seven times the value exported in 1970.

On the other side, we imported $273 billion worth of goods in 1981, including many items which we do not readily produce.

On the financial side, the United States has traditionally been a large investor abroad; we have also attracted significant foreign investment. Some years ago, we were a net investor abroad but, by the 1970's we had ceased being a net capital exporter and had usually incurred a deficit in merchandise trade.

In sum, from both the financial and the trade perspectives, we have a significant stake in the international economic system, in terms of jobs and income, as well as in terms of maximum choice of products at the lowest possible prices, and in terms of competition promoting adjustment, strength and viability.

I said earlier that I wished to discuss three trade issues and consumer awareness and resonse to these issues. The first is the export of hazardous products, particularly to the Third World. There was a good deal of fear and consternation when President Reagan rescinded an executive order signed by President Carter which would hae created a complex evaluation and licensing process for exports of a variety of hazardous products. There is no question that many nations are not in a good position to determine for themselves what products are hazardous under what circumstances, particularly when we consider the universe of products which are manufactured or prepared for testing and are, at least potentially, available fo export. At minimum, what is necessary is a system of exchanging information on what responsible testing and evaluation organizations know about potentially hazardous products. Information alone may not be helpful, however, if the recipient is not able to use it effectively. The United States probably has the most extensive notification program of any country already in place. We also provide bilateral assistance to increase the ability of developing countries to use information of this type; assistance is also provided through United Nations agencies, such as the UNDP, to which we contribute.

Consumer and other groups, apparently in the belief that this was not enough (and perhaps they are right, particularly since other countries do not do this sought action at the United Nations last year.) This resulted in the passage of Resolution 37/137, by a vote of 146 to 1. The United States was the lone dissenting vote. Our "no" vote was redicated on budgetary grounds, for the resolution will apparently result in an increase in expenditures by the United Nations.

However, we did have practical problems with the resolution. The first draft of the proposed resolution, as suggested by the developing countries, with the apparent support of consumer and other groups, called for a simple ban on just about anything deemed dangerous. This was rejected by the developed countries on the ground that it ignored the benefits of some products which were also dangerous if misused. I suppose DDT would be an example. An approach based on information exchange was proposed as an alternative, but the next draft offered proposed only export controls, with exports to be permitted when the importer gave its informed consent. This was again rejected, and two more drafts were ultimately used to reach final agreement.

The resolution which was adopted states that:

> ". . . products that have been banned from

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domestic consumption and/or sale because they have been judged to endanger health and the environment should be sold abroad by companies, corporations or individuals only when a request for such products is received from an importing country or when the consumption of such products is officially permitted in the importing country; . . ."

While this formulation may sound attractive, there are problems which are not self evident. First, who is to make the request, the government or a commercial importer? If the latter, is there any real protection? Second, the resolution ignores the fact that there may be dangerous products manufactured in countries which have minimal or no domestic standards. It not only discriminates against countries like the United States, which have domestic standards (although we may disagree on their efficiency or desirablity) in favor of those which have not yet been able to develop them, but also probably provides no real protection.

There are, of course, other provisions of the resolution which seek to attain similar worthy goals but also present practical problems, but this is, I believe, a sufficient example.

But what impact will this resolution have? It may be the inception of a non-tariff-barrier to trade which does not accomplish its real purpose, the protection of health and environment, and thus imposes an unnecessary obstacle in the trading system. The GATT, of which the United Sttes is a member, has been seeking to eliminate unnecessary barriers for some 35 years. The selection of a political forum, such as the General Assembly, where not all of the players may have the requisite expertise in the technical fields involved, may focus attention on the issue, but I believe that better progress would have been made toward the goal if other approaches had been taken.

The resolution, in the development of which consumer organizations played a role, is an example of a simple non-tariff-barrier. I would now like to discuss an approach to job protection which, in international economic jargon, is called a "trade-distorting performance requirement."

The "Fair Practices in Automotive Products Act," HR 1234, now has about 70 cosponsors in the House. Last year the same bill had about 230 cosponsors and was approved by the House by a vote of about 215-188. It was not approved by the Senate.

This bill is relatively straightforward: if an automobile company sells 900,000 cars in the United States annually, then by 1987, 90% of its product value sold here must come from United States sources. With lesser sales volumes, the percentage of United States value would be proportionally smaller. A sales level of 100,000 units per year would not require any United States value. If a manufacturer does not achieve this level, he would be allowed to sell only a smaller number of vehicles the following year. For many foreign producers, this is a de facto quota of 100,000 cars/year - similar to those on televisions, shoes and clothing.The main selling point for the bill is that it would allegedly save existing automative manufacturing jobs and provide incentives to increase future automotive and related employment. There is no question but that the automobile industry has been hard hit during the past few years. The Congressional Budget Office (CBO) reports that, from December 1978 to April 1982, the number of jobs in automotive manufacturing decreased -- plummeted -- from 762,400 to 459,700. We are all aware of the painful unemployment in Detroit and in steel producing areas. According to the CBO, four factors in particular have led to this decline:

-- Slow economic growth and high interest rates;

-- Increased productivity growth in the United States automobile industry, as manufacturers tried to meet heightened foreign competition;

-- Increased auto imports as the market swung from standard to compact and subcompact models;

-- Increased offshore sourcing of components as automakers sought to decrease production costs.

Will this bill actually help either the automobile industry or the overall economy? There are no clear and certain answers that can be reliably quantified. However, the CBO has made some very conservative estimates under various conditions, and they estimate that car prices could increase by $500, about 6% as a result of passage of the "Domestic Content Bill".

Would employment increase? Almost certainly so in the automotive manufacturing and supplier industries. Again, using moderate assumptions in line with both the Bureau of Labor Statistics and industry studies, the CBO estimates an increase of 211,000 by 1990. If prices increased by $1,000, the job increase would be 121,000, and if there were no price increase, the job increase in these industries would be 307,000.

However, when indirect effects and other sectors of the economy -- the results suggest clearly that the net effects for the United States economy, in terms of real growth, inflation and employment, though small, could be negative.

If there is trade retaliation by other countries, and such a step would be appropriate under the GATT, and likely in the face of massive reductions in their exports to us, the CBO has estimated a loss of 220,000 jobs in non-auto manufacturing industries, with a gain of 70,000 auto jobs - both five years after the law goes into effect.

The losers would be longshoremen, who unload cars, teamsters, who transport them, dealers, who sell the, and, equally important, the many thousand who depend on United States export based businesses.

Beyond the probable increase in cost of the vehicles, there are other and real consumer costs. With relatively free trade, manufacturers tend to produce models to suit a variety of tastes and needs. In a protected status, however, it would be reasonable to assume production of a smaller variety of products. In addition, foreign producers would tend to send only the most expensive models, reasoning logically that they had better get the highest possible return on each vehicle entered within their de facto quotas. This has been the experience with other consumer products subject quantitative to limits, such as apparel - ans we are talking about practical limits.

I would also predict that, if the Domestic Content Bill is enacted, other sectors will line up, bumper to bumper, to seek similar protected status.

Will there be retaliation? I believe there will be, against such products as computers and electronic equipment and agricultural products.

Why have I talked about this bill to people interested in consumer welfare? I think everyone here is aware of the consumer interest in the bill; most were probably aware of it already. I am aware of only two consumer groups that have taken positions on the bill. It would harm consumer welfare, it would build barriers to trade, it would misallocate resources, and it would probably hurt the overall economy. This is clearly an area in which consumers should take an interest.

The third topic I would like to discuss is production subsidies, which lead to overproduction, which lead to the need to dispose of the surplus. Butter is a case in point. The United States price support program has set a price to the farmer which produces far more than the market will clear. The United States Government is buying the butter, freezing it, and storing it. Two years ago, we sold New Zealand a large part of the store butter we then held, because the warehouses were rapidly filling up. We are approaching that situation again. It is a real and immediate problem.

One approach was recently approved by the Senate Agriculture Committee to sell the surplus butter abroad at the rate of at least 150,000 metric tons per year at a price not less than the floor price set in the International Dairy Agreement. The Agreement price is very low, well below the current world price, which in turn is below United States prices.

Sales of a subsidized agricultural product in a manner which unfairly takes away some other country's traditional market is not permissible under the GATT. Nonetheless, such a sale would probably increase consumer welfare in other parts of the world and it would recoup some of the cost of the domestic price support program. Other countries subsidize their agricultural exports -- this is a major source of contention between the United States and Europe. We do want to solve the problem. But there is no easy answer -- particularly since 150,000 tons is about one-fourth of the current international trade in butter and the price impact of such a sale would be very great. In addition, the only real market for such an amount of butter is the Soviet Union. Think of the subsidy we would be providing. You and I pay for it.

The consumer movement in the United States is probably the best organized and most independent in the world. It can be terribly effective. But it has not focused on interenational economic issues. My puzzlement is why it has not done so. I welcome this discussion as a strong first step in the right direction.

INTERNATIONAL CONSUMER POLICIES

Robert R. Kerton, University of Waterloo[1]

Consumer protection policy and consumer research have paid pitifully little attention to the things which can be learned through the international exchange of ideas. These three papers provide a welcome increase in our understanding of international consumer matters. Moreover, they provide explicit directions on some valuable routes to take.

Hans Thorelli, author or co-author of six books on consumer topics in developed countries, gives a report of his recent appraisal of the situation in third world countries. In it he argues that research on these urgent problems is at a primitive stage. He further argues that policy priorities must be revised to account for strikingly different market and consumer realities in developing countries. Louise Trubek, Executive Director of the Wisconson Center for Public Representation, lecturer, and author of papers on environmental protection and public interest law, presents some conclusions from a research/exchange project designed to make European and American policy-makers more aware of each others' work. She makes an arresting case for how little we know, and a compelling argument for how much is to be gained by learning from rich and diverse experience elsewhere. The third exposition is by Rhoda Karpatkin, Executive Director of Consumers Union, member of a number of national commissions, and an international consumer leader who has given much, most recently as Vice President of the International Organization of Consumers Unions (IOCU). The Karpatkin review extends the Trubek conclusion to include developing countries. She provides a concise summary of the crucial need for international action and a synopsis of some ambitious efforts of IOCU to provide consumers in developing countries with the skills and information needed to deal with the unconscionable threats to health and safety they now face.

The Thorelli survey points out that despite the obvious urgency of these consumer problems there is too little help available from research because the topic has been grossly neglected. Based in part on his recent research in Thailand, he posits that one critical distinction faced by consumers in poorer countries is the exceptionally high degree of risk to be faced when trying to make prudent consumer decisions. The risk arises from a lack of standards, predatory practices of certain sellers, food adulteration, etc. Information is scarce and therefore extremely valuable. The market ecology is different in developing countries so policy must be different. This is the reason that he reverses the order of priority of the policies he has often argued as appropriate for developed countries: information policies, then educational measures, then consumer protection programs. In developing countries it makes little sense to give consumer information first priority before a fair framework of exchange exists. And—I would add—before consumers can interpret information, they first need to acquire a certain set of skills (consumer search capital). After the basic rules and skills have been obtained, informational and educational policies will take on more importance.

Elements of consumer protection might be borrowed from the experience of more developed countries. If so, cautions Thorelli, this must be done with great care to recognize differences in the ecology of markets, and it must be done with respect for the preferences of individual third world consumers. But this borrowing can go in two directions, as the presentation by Louise Trubek makes clear. There is a danger in being too close to our own experience with consumer protection and thereby failing to learn from other experiments. The Trubek paper makes an important contribution by providing a synopsis of the rich array of novel methods being used in Europe. Diversity is guaranteed by the nature of the European Economic Community, founded as it is on the 1958 Treaty creating an organization in between a U.S. style system and a voluntary body like the United Nations. When the United Kingdom, Ireland, and Denmark joined, it was agreed to include a council to co-ordinate consumer policy. The Bureau Européen des Unions de Consommateurs (BEUC), has a number of achievements, but two are particularly important: it has reduced the time it takes for one country to learn from another, and it has permitted the development of prospective consumer policies.

The Trubek presentation describes several alternative consumer protection methods. The "Nordic model" makes relatively little use of private consumer activity but has deployed an ombudsman and administrative justice with success. The "Latin model" makes considerable use of the court system but - surprising to Americans - little use of attorneys. The "Code Approach" used extensively in the United Kingdom and the Netherlands makes much use of voluntary codes. There is also a "Volunteer-plus model" which gives a central role to volunteers alongside a mix of public/administrative/legal resources. In Europe, national consumer groups provide real and dynamic leadership with consumer protection; and sophisticated professionals contribute much to this progress.

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[1] Professor of Economics

If the Trubek presentation provides sound reasons for learning from and sharing in European experience, the Karpatkin paper shows that this can and should be broadened to include the whole world. Otherwise we are obliged to re-invent techniques for discovering the defective wheel and to work from scratch to re-discover, in each country, known health hazards. The Karpatkin work provides a concise introduction to the International Organization of Consumers Unions (IOCU) founded by five national consumer organizations - including Consumers Union - in 1960. She explains the transformation from a test-sharing organization which occurred about 1981 when IOCU had grown to include 115 consumer organizations in 47 countries. By that time the international nature of certain consumer problems was painfully obvious. One specific difficulty was, and is, posed by multinational companies which "... pursue private interests on a global scale, but which were not accountable to any (comparable) authority." This multinational threat in no way denies - as a questioner pointed out - the real gains to be made from international trade in reliable products whose advantages and costs have been fully and honestly presented. But far too many of the defective and dangerous products which have been restricted or banned in developed countries are now being sold with sophisticated marketing techniques to third world buyers - buyers who lack both the private skills and the public facilities for basic consumer protection.

As counter-measures, IOCU has played a leading role in setting up Consumer Interpol, the international hazardous products network, Health Action International, and the Pesticides Action Network. These systems help to build or strengthen the consumer protection capability of developing countries. Single purpose campaigns are also organized. For example, the Karpatkin paper also provides a brief discussion of IOCU's role in correcting the over-selling of infant formula. The incentive structure had to be shifted so that many of the sellers of breastmilk substitutes now find it in their economic interest to market their product in ways which result in fewer infant deaths. All of these policies are founded on the basic consumer rights to life, health, safety and informed choice. It is striking that this rationale is common to the prescriptions contained in the Thorelli paper and the practical policies of the consumer movement as outlined in the Karpatkin presentation. In fact, all three papers provide a consistent strategy for urgently-needed improvements (a) to our understanding and (b) on the policy front.

CONSUMER LAW AND POLICY IN THE EUROPEAN COMMUNITY: AN AMERICAN PERSPECTIVE

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ABSTRACT

This paper analyzes the problems in the development of positive consumer protection policies and programs in the European Community (EC). First, similarities and variations between the programs of the EC member states are analyzed in the context of the modern political economy of consumer protection. Then, problems and policies at the EC level are discussed. Finally, thoughts on the significance of the EC experience for American consumerists are presented.

This paper discusses the role of consumer law and policy in the process of European integration. Since 1957, a number of European nations have joined together to form the European Community (EC). The Community is designed to increase the free flow of goods and factors of production among the Member States, and to develop common policies in specific areas. Common policies include agriculture, antitrust, transport, and to a limited degree macroeconomic policy. The Community eliminated all internal tariffs and maintains a common tariff with the outside world.

Originally formed by six European nations (France, Germany, Italy, Belgium, Holland Luxembourg), over the years the Community has been enlarged by the addition of England, Denmark, Ireland and Greece, and there are now ten members. Although the primary goal of the EC was and remains the elimination of barriers to trade and investment among its Member States, and the development of common policies in fields directly related to economic integration, in recent years the Community has also sought to expand its activities into new areas like consumer and environmental protection.

The paper looks at the development of the EC's consumer protection activities from an American perspective. Since 1970, I have been a public interest interest attorney specializing in consumer issues, and have taught courses on consumer law and policy at the Law School at the Consumer Science Department of the University of Wisconsin-Madison. In 1980, I received a grant to work with others on a study comparing consumer law in the U.S. federal system and the system emerging in the European Community [1].

This study gave me an opportunity to observe the activities of the Community and to meet with consumer law specialists, and consumer groups in several European nations. This paper, which draws, on these experiences, discusses three major issues: consumer protection in the individual European Member States; the activities of the European Community; and the significance of the developments for Americans, especially consumerists.

The European Community is a supernational entity created by treaty. The Treaty of Rome which established the EC, places certain limits on the Member States' ability to bar trade and investment from other Member States, and authorizes the EC institutions to pass certain kinds of legislation that bind Member States and may preempt contrary national legislation [2]. These powers give the Community the capacity both to create uniform laws binding in all the Member States as well as to require them to "harmonize" their national laws. In the European system, "harmonization" means bringing national laws into general agreement with common European approaches, but involves less than full uniformity of law.

One of the areas in which the EC has authority to create uniform law and/or require a degree of harmonization is consumer protection. The EC has a consumer protection service, and has taken some measures which would lead to legal integration in this area. However, while the EC has the legal authority to develop a communitywide system of consumer law and policy, superseding national regulation, these powers have to date been used sparingly. As a result, most of the protection currently provided for consumers in the ten Member States derives from the national laws of the respective States. Before analyzing developments at the European level, therefore, it is necessary to look at the policies that have been followed by the various members of the EC.

CONSUMER LAW AND POLICY IN THE MEMBER STATES OF THE EUROPEAN COMMUNITY

To analyze developments at the national (Member State) level in Europe, it is useful to distinguish two basic approaches to legal protection of consumers. The idea of government intervention in markets for protection of consumers is not a new one: it has long been recognized that the state must, at a minimum, establish the basic rules of the game for market transactions, preserving competition, banning fraudulent practices, protecting consumers against intentional and negligent injury. In this form of limited approach, which Europeans call the "liberal" view of consumer protection, legal protection is primarily assured by establishing specific rights and relying on individuals to enforce these rights in courts.

At least in recent years, there has been a recognition that effective consumer protection often requires more substantial, direct or positive forms of governmental intervention as well. As the limits of competitive policy, antifraud laws, and individual legal rights have become more apparent, many countries have expanded the role of government in the consumer area. The newer approach adds to the traditional "liberal" form of consumer law such items as direct regulation of product quality and safety, continuing regulation of market activity by specialized agencies, specific disclosure requirements, prohibition of certain types of contract clauses, expanded consumer participation in government decision making, and creation of more effective mechanisms for redress of consumer grievances. I shall refer to this expanded approach as "the modern political economy of consumer protection."

Most the EC Member States have adopted substantial bodies of consumer protection law and developed affirmative national policies designed to protect consumers. Although there are major differences among the ten nations, it is clear that to one degree or another all have accepted the need to go beyond the more traditional "liberal" approach. Summarizing a massive study of the consumer laws of nine nations conducted for the EC prior to accession of Greece, Professors Norbert Reich and Hans Micklitz demonstrate that there are numerous areas in which all the nations studied have taken action to protect their consumers [3]. These include: common major concerns of mandatory product and price information; regulation of advertising, marketing and selling methods; some direct control of market prices and rates; control of quality and safety in consumer goods and services; mandatory warranty protection; regulation of unfair or unconscionable consumer contracts and clauses; control of consumer credit; provision of more adequate consumer remedies, legal advice and consumer complaint handling; and mechanisms for consumer participation in making and administering consumer law and policy.

While all the countries have shown concern for these areas there is great variation in the extent and degree to which European nations have implemented the various aspects of the modern political economy of consumer protection.[1] There are substantial variations in the substantive policy areas given high priority: for example, some countries have paid more attention to consumer credit than others. In addition, there are certain structural variations of special interest to American observers. These include:

(i) Methods and Legal Instruments for Consumer Protection

The EC Member States vary substantially; not only are their economies very different (compare Germany and Greece) but they also have very different legal traditions. Differences in constitutional structure and legal history help explain some of the major differences in the legal methods employed to implement consumer protection policy. Some countries rely on administrative and criminal law; others use civil law more heavily. In some, more emphasis is put on government encouragement for industry self-regulation. Thus Denmark and to some extent England, have created administrative supervisory and enforcement agencies--Ombudsman, Office of Fair Trading--where others rely more heavily on the court system. Some countries, especially England, Denmark and the Netherlands, have stressed the creation of voluntary "codes of conduct" for business: others rely more heavily on direct government regulation.

(ii) The Organization of the Consumer Interest and Its Capacity to Influence Policy

While all the European countries recognize that consumers shall have a voice in the formation and implementation of government policies that affect them, their approaches to consumer participation vary significantly. The problem of organizing effective voice for consumers is a complex one.[2] It is not easy to organize consumers as such, and all approaches to providing some institutional voice for the abstract interest of consumers present some problem. The Europeans have experimented with several approaches.

One factor which leads to variation in consumer participation is the relative strength of national consumer movements. In almost all the EC Member States, there is at least one consumer information magazine which is quite similar to our Consumer Reports (indeed, many of these magazines were originally created with help from the U.S. Consumer Union). These magazines provide the financial base for consumer organizations, some of which play an active advocacy role. While there are such organizations in most EC nations, their relative strength and effectiveness varies, as do the overall consumer movements. In some countries like England, consumerism is well established and organized; in others the movement is only getting off the ground.

In general, consumer voice in public policy may be provided by specialized private consumer organizations, semi-public consumer bodies with regular governmental support, and other organizations, like unions, for which consumerism is just one among many concerns. In addition, separate groups may form "umbrella" consumer advocacy institutions, like the Consumer Federation of America. All these approaches have been tried in Europe, but the emphasis varies from country to country. Specialized private associations are especially active in the U.K., Netherlands and Belgium. In some countries there are government-supported, semi-public consumer bodies that include advocacy among their functions (National Consumer Council in the U.K., C.R.I.O.C. in Belgium, *Institut National de la Consommation* in France, *Siftung Warentest* in the Federal Republic of Germany). In some countries, like Denmark, Netherlands and Belgium, trade unions and cooperatives have been especially active in consumer affairs. In several, e.g. Germany and Denmark, there are also national consumer federations.

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[1] This discussion draws heavily on comprehensive research conducted by Professor Thierry Bourgoignie for our joint project. For a general discussion see Bourgoignie [4].

[2] For a general discussion of this problem see Trubek and Trubek [5].

CONSUMER LAW AND POLICY AT THE EUROPEAN COMMUNITY LEVEL

The European Community is a "supranational" entity created by the Treaty of Rome which was signed by the six original members in 1957. In labelling the Community "supranational," scholars try to suggest that it is more of a sovereign entity than an international organization like the United Nations or the General Agreement on Tariffs and Trade (GATT), but less sovereign than a federal system like the United States or Canada. Thus, while the Community, as such, has the power to create law directly binding on the Member States and on individuals and organizations within them, these powers are limited by the Treaty to specific areas of concern to the Community. All "supranational" law must derive directly from the Treaty, or be based on "legislation" enacted pursuant to it by the Council of Ministers. Since the Council includes the Heads of Government of all the Member States and effectively can only act when there is unanimity among all the members, its lawmaking powers are subject to substantial practical limits. In addition to the Council, the Community includes the European Commission, a supranational bureacracy with power to propose new measures and implement those agreed upon by the Council, a Court of Justice with final authority to interpret the Treaty, an elected European Parliament whose role is primarily advisory, and an Economic and Social Council.

Consumer protection was not included as one of the explicit, priority goals of the Community when it was established in 1957. However, in 1972 the Heads of State of the Member Nations recognized the need for more active Community action in certain social areas, including consumer protection. Noticing that the Treaty of Rome sets forth as an objective of the EC "the Constant improvement of the living and working conditions of the [European] peoples," the Heads of State indicated that consumer protection was a valid subject of community action and called on the Commission to develop a consumer program. In 1975 the Council adopted the first EC Consumer Protection and Information Program, which recognized five basic consumer rights: protection of health and safety; protection of economic interests; redress of grievances; information and education; and representation ("right to be heard"). A second program was adopted in 1981. While this second program reaffirmed the Community's commitment to the consumer cause, it was more hesitant in tone, gave less stress to direct government intervention, and encouraged more use of voluntary industry codes of conduct. These policy statements confirm the Community's power to legislate in this area and suggest a commitment to what I have called the modern political economy of consumer protection [4].

While the EC's Consumer Programs contemplate EC action in all areas of consumer law and policy, so that the five basic consumer rights would be given effective protection, actual implementation has been slow and spotty [4]. The EC has taken substantial action in one area. A major objective of community policy has been to "harmonize" the various laws governing product standards. Conflicting national laws on product standard labelling, and packaging constitute a clear barrier to intracommunity trade, and the EC has issued numerous directives which require Member States to bring national law into conformity with common standards. While this activity is primarily designed to reduce trade barriers, the common standards have taken consumer concerns into account, so that in this field at least EC-level action has contributed to protection of the consumer's right to health, safety and information. In other areas little, if anything, has been done at the European level. For example, while the Commission has conducted studies and held symposia on the need for expanded consumer education and advice, increased consumer representation, more effective "access-to-justice for redress of consumer grievances, the Community has taken little concrete action in these areas. Further, while the Commission has proposed the passage of directives setting European-level standards in areas like misleading advertising, consumer credit, door-to-door sales, and liability for defective products, none of these proposals have been adopted by the Council as yet.

As a result, many European consumerists have become disillusioned about the prospects for an effective European-level consumer law and policy. It is fair to say that when the EC first moved into the consumer law areas, consumerists in many European nations looked to Brussels as a source of progressive legislation and policy that would enhance the situation of their national consumers. To a significant degree, the EC's first Consumer Program represented some of the most advanced thinking in consumer circles, and many European-level measures it proposed would, if adopted by the Council, have increased consumer rights in most Member States. Today, the picture looks quite different: since most of the proposed legislation has never gone beyond the draft stage, the Community does not seem to be able to fulfull its early promise. Moreover, the Community may be seen by some as a barrier to more effective consumer protection in Europe. In the first place, the existence of draft European-level laws has served as a reason (or at least a pretext) for delaying reforms in national laws. Secondly, the European Court of Justice and the Commission have begun to subject national consumer laws to close scrutiny under Article 30 of the Treaty of Rome, which bans non-tariff barriers to trade, causing apprehension among some consumerist circles. While to date it is hard to say that pending European legislation, per se, has impeded national reform, and while national measures genuinely designed to protect consumers have withstood all Article 30 challenges, it is not surprising that Europe's consumer movement is beginning to doubt whether the EC institutions are their true allies. Recently, the Bureau European des Union de Consommateurs (BEUC), a federation of national European consumer groups set up to operate at the European level, expressed serious concern about the lack of progress in implementing the EC Consumer Programs [6].

BEUC identified three causes for the lack of progress at the EC level: "the Commission's lack of support and resources for its own programme, the Parliament's lukewarm--nay, hostile--response to this programme (the recent rejection of even the modest early-warning system on dangerous products is a good example of this), and, last but not least, the total indifference of the Council of Ministers" [6].

When my colleagues and I set out to analyze the causes of the EC's failure effectively to implement its Consumer Program, we identified two basic problems which seem to be hampering progress [1]. The first is the existence of potential tensions between the goals of the Program and the Community's primary mission, which is to facilitate the free flow of trade and investment. The second is the lack of an effective consumer movement at the European level and effective mechanisms for consumer input at the EC level [7].

The EC was initially set up to foster economic integration. Its primary concern has been to ban all intra-Community tariffs and gradually to reduce all other obstacles to the free flow of goods, services and factors of production within Europe. (We call this the "open borders policy"). The Community's concern with consumer protection stems in part from its desire to implement the open borders policy: if the several national consumer protection laws varied substantially, this lack of legal uniformity could hamper the economic integration process. To ensure that this does not occur, the Community has two policy choices: it can create strong but uniform consumer protection law at the European level, or it could simply limit the power of its members to pass any laws benefiting consumers. In the first case, consumers would receive substantial protection under a single, European-wide set of laws, and business would not be hampered by a multiplicty of different rules or product standards, liability, consumer credit, marketing practices and the like. In the second, business would also face a uniform sitution, in that there would be no legal intervention on these matters, but consumers would receive less protection than they now enjoy under their respective national laws.

The Community's first Consumer Program suggested that the Community had opted for the first of these approaches: Europe would evolve towards a system where a common standard would be followed in all areas where variation in national law would hamper economic integration. But in recent years some have felt that the EC was flirting with the second choice, which achieves "uniformity" by mandating deregulation as a European policy. It would not be fair to say that the EC has really made a clear choice between these polar options. Rather, what has happened is that the effort to create effective integration of consumer law in Europe has run into a lot of trouble. The EC institutions are not conducive to effective creation of uniform consumer law for the ten Member States: the consumer protection service is underfunded, there is no democratically responsive lawmaking institution at the European level, and the unanimity rule makes it hard to reach agreement on specific measures. In this situation, some may feel that it is easier to harmonize consumer protection and open borders by limiting national power to do anything, thus effectively deregulating the area, than to create a truly European body of law.

If the Community's primary concern for open borders and the lack of machinery to implement law at the Europe level appears as one cause of the lack of progress, the relative weakness of the consumer movement at the European level is another. Unlike the United States, where the consumer movement is organized at the national level and the public accepts the idea that federal agencies must deal with consumer issues, the European consumer movement is primarily organized at the Member State level and there is little "European" consumer awareness. While in individual nations European consumerists can have substantive influence on the media and policymaking, there has never been a European equivalent of Ralph Nader or the consumer reporting in our national media. The BEUC is a remarkably effective institution, considering its size and resources. But BEUC must operate largely within the closed, technocratic environment of the Brussels institutions. Since the European Parliament has only an advisory role in the consumer field, there are few incentives for the rise of legislative "consumer policy entrepreneurs" to support new laws and improvements in implementation. In contrast, industry is well organized at the European level, and has the resources to work closely with the manifold technical bodies that formulate policy for the Community.

In summary, while the European Community has the formal authority to establish a European-level consumer law and policy, and has adopted this as a goal, it has done relatively little to make its broad declaration of rights into realities. The Consumer Service of the European Commission has proposed numerous measures which would raise levels of protection in much of Europe, but most languish in the cumbersome procedures established for European-level lawmaking.

BEUC has been a remarkably effective voice for consumers in Brussels, considering its limited resources, and access to policymakers, but this has not been adequate to offset the strong counterpressures from business, the lack of a clear commitment to an effective positive European Consumer protection policy within the Commission, the general anti-regulatory climate, and the recalcitrance of some Member States.

AMERICANS' INTEREST

Americans have a great deal to learn from and about consumer law and policy in Europe. The foregoing represents a hasty sketch of some important developments, but much more study and research on the European scene is needed. I hope the brief discussion of European developments suggests some of the reasons why Americans slowly take more interest in European consumer law. Let me merely stress a few of these.

First, American consumerists, government and business need to know a lot more than they do about the way consumer law operates in Europe. From the consumerist's viewpoint, there is much to be learned from observing the operation of the European system. While the EC itself has failed fully to implement its Consumer Programs, the Programs themselves represent as comprehensive a statement of the needs and rights of consumers as has ever been promulgated by any government. And in many individual European countries, progress and policies have been developed which we can learn from. For example many European governments have done more to support effective consumer voice than we have: the role of semigovernment bodies like the British National Consumer Council is especially interesting in this regard.

We can learn to improve our own system by observing what is going on in Europe. Europeans have developed new ways to handle consumer matters, as well as adapting American approaches in ways that may improve on the original. For example, the European "general interest suit," a variation on our class action, deserves study. The Europeans are struggling to develop a relationship between central authority at the EC level and the Member States; study of these matters will help us understand our own federal system better at a time when we are reconsidering federal-state relations. Finally, American business is increasingly concerned with selling in Europe: lack of knowledge of consumer law and policy in the Member States and at the EC level could hamper these efforts.

Secondly, American consumers may increasingly be affected by consumer policies in Europe. As international trade becomes more important to the American market, American governments will have to reach some accommodation with those in other industrial countries where conflicting consumer policies affect trade. The time may not be too far off when policies set in Europe or Japan, will directly influence the type and level of protection available to American consumers.

As we move to more of an international system for harmonizing consumer protection policies, we should take a lesson from the experience of the European Consumer movement with the EC institutions. Europe consumerists have discovered that methods of organization and techniques of representation that work effectively in national political arenas may fail when employed in the very different environment of supranational and international institutions. In the future, Americans may need to understand and master the politics of international policymaking: in such an effort they can learn much from their European counterparts and benefit from joint activities undertaken with groups like BEUC and various national bodies in Europe.

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CONSUMER POLICY IN DEVELOPING COUNTRIES

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Abstract

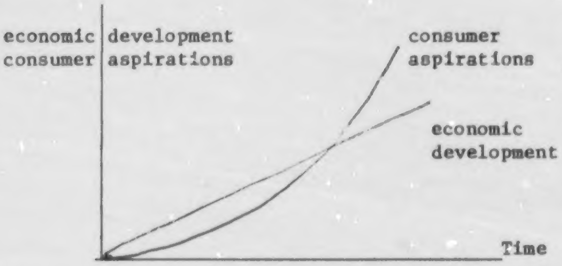
Consumers in the less developed countries (LDC) are facing a high-risk marketplace. This is due to structural features of the market, seller chicanery, and buyer poverty. A program of consumer emancipation is proposed, based on consumer protection, education, and information in that order. The program is predicated on a concurrent transformation of cryptocapitalist markets into an open market sector where buyers and sellers are substantially equal partners.

Consumer Policy and Consumer Aspirations

No one interested in human welfare can doubt the urgency of an active consumer policy in the economically less developed countries (LDC). We mean by consumer policy measures taken to enforce consumer rights and to promote the interests of citizens as consumers. Such policy is still at a strictly primitive level in the vast majority of the LDC. Where laws exist they are frequently haphazardly enforced.

This sad state of affairs probably reflects the fact that policy develops in response to actual or perceived problems in the environment of the policymakers and their constituents. But LDC policymakers have had their attention riveted on infrastructure and heavy industry. And in the role of consumers, constituents of the LDC tend to have very modest aspiration levels. As indicated by Figure 1 one may indeed hypothesize that consumer aspiration levels are strongly correlated with levels of economic development; in fact from a very modest beginning the former may indeed overtake the latter, revealing a certain "dissatisfaction gap."

FIGURE 1. Economic Development and Consumer Aspirations Levels



A comparison of Thailand and Kenya on the one hand with the United States and Sweden on the other would appear to provide empirical support for our hypothesis. Indeed, most people in the LDC do not even think of themselves as consumers. Note, too that there is a seller's market in these countries with little incentive for producers to concern themselves with consumer interests. Further in this area of consumer experience in the marketplace of the LDC, there has been an astounding lack of a research base on which to anchor policy initiatives.

The Present Situation in the LDC

Ecology of Consumer Markets

In comparison with the rather abundant research on consumer behavior in affluent countries--much of which has been done by participants in this conference--the experience of consumers in the marketplace of the LDC has been grossly neglected. The author and his colleague Gerald D. Sentell have recently concluded a baseline field study of this subject in Thailand. Taking into account follow-on studies in Kenya [14] and Turkey and much anecdotal evidence from other LDC we believe it is possible to make certain generalizations about the ecology of consumer markets more or less applicable to this admittedly highly diverse set of 100 or more nations.[2] The Thai study has been accounted for in detail elsewhere [12]; a few salient features of the marketplace environment will be outlined to facilitate understanding of the policy proposals to follow.

The outstanding feature of the consumer buying process in the LDC is that it is so often fraught with high risk. This is due to market structure problems as well as to characteristics of sellers and buyers themselves. Three major structural factors existing side by side frequently reinforce each other. They are the lack of quality control in local manufacturing, the equally striking lack of transportation and storage facilities suitable to the preservation of fresh foods, and the predatory practices of sellers. The market system is one where relatively few things are prepackaged, and where packaged goods are often adulterated. There are few official product standards, and everything tends to be approximate. The veracity of weights and measures may well be questionable. In Thailand, as in many other LDC, chicanery is not unethical--it is a game.

The single most important characteristic of the typical LDC consumer is, of course, that of poverty. This means that he can ill afford to make mistakes. Unlike many ghetto consumers in the MDC, the poor consumer in the LDC does not seem to resign himself in a state of stupor in facing the marketplace. Realizing his high-risk situation, he counters with a surprisingly intensive search effort.

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[2] Preliminary research also suggests rewarding comparisons between the marketplaces of the LDC and the People's Republic of China. See [7] and [8].

From Bangkok down to the village level, a very important part of all Thai transactions are carried out in public marketplaces which are generally privately owned and operated.[3] In these marketplaces--to which Middle Eastern bazaars are an obvious pendant--information is "poor, scarce, maldistributed, inefficiently communicated, and intensely valued." The search for information, "laborious, uncertain, complex, and irregular" as it is, is therefore the central experience of life in the public market. Sellers and buyers often are as much interested in "making search fruitless for others as they are in making it effectual for themselves" [3].

Bargaining represents the classic way of transacting business in the LDC. It should be viewed as a natural outgrowth of the uncertain and heterogeneous market environment. Bargaining tends to be a time-consuming form of search, although to many buyers as well as sellers it is also an enjoyable game. Unless seller and buyer are old acquaintances there is a tendency on the part of both to view it as a zero-sum game, encouraging an ethic of "doing whatever you can get away with." Devoting his career to a particular trade, the seller more often than not is likely to gain the upper hand in ad hoc transactions.

It seems that information search is the principal means that LDC consumers use in fending for themselves. In a sense they all tend to be "information seekers." Unfortunately, the information they obtain tends to be ephemeral and unreliable; past experience has little learning value. Thus, it is not surprising that they differ markedly from the Information Seekers (IS), the group of consumer sophisticates we have identified in the more developed countries [9]. It has been shown that the IS of the latter countries more than others serve as opinion-leaders, redress-seekers, and vigilantes of the marketplace [11]. There is little such activity among even the most information-minded Thai consumers. The lack of reliable information is a direct expression of the vicissitudes of that marketplace, which tend to chain the consumer to the position of eternal underdog. It is clear that the reduction of the randomness must be a major avenue of the LDC consumer policy.

Cryptocapitalism and the UN Development Gospel

One may ask, what are the prospects of the private or public sectors in the "typical" LDC responding to the plight of the consumer? Unfortunately, the short-term prospects are dismal. The philosophy of the private sector in most of these nations is one for which cryptocapitalism is the most appropriate term. Cryptocapitalism in some respects is like a modified guild system. In a majority of industries and trades there is a seller's market. The fact that supply does not expand to meet demand stems from the widespread notion that overall demand is basically unchangeable (though perhaps changing). To avoid "rocking the boat" traders--it would be misleading to call them competitors--in a market by express or silent agreement seek to preserve "fair" market shares for all. Indeed, members of petty trades often accept shrinking shares to make room for otherwise unemployed newcomers, typically relatives or friends of existing traders. Big-league industrialists typically are unwilling to take risks other than those promising payback within three years or less. Capitalists tend to expatriate major parts of their fortunes. At the government-business interface there is considerable corruption, consumers ultimately paying for the privileges obtained by the unscrupulous. A private sector based on cryptocapitalism is a serious retardant of development, just as in one case after another (Japan, Hong Kong, Taiwan, South Korea, Singapore, to name a few) it has been demonstrated that a private sector based on open markets can be the prime propellant of economic growth.

In the present cryptocapitalist atmosphere multinational corporations--such powerful change agents in many other fields--have not seen the need or had the opportunity to apply the kind of consumer-oriented business practices fairly prevalent in many of their home countries.

The large public sector in most LDC is focused on building "infrastructure" and heavy industry in the style recommended by the development gospel of the UN and most of the world's motley crew of development economists for the last 30 years. It almost goes without saying that this sector is heavily producer oriented, whether we are thinking of its industrial or consumer (railroads, mails, etc.) marketing aspects. No doubt a good deal has been accomplished in the area of infrastructure, such as highways, ports, and schools, although with the exception of public health the achievements seem quite modest relative to both needs and the amounts of international assistance and other resources spent in the process. It is probably fair to say that the costly governmental forays into heavy industry generally have been less successful. Certainly, they have typically failed to result in any increase in standards of living. Many governments in dual-economy LDC have traditionally favored the metropolis at the cost of the rural areas by keeping tight control on the prices and marketing of basic foods. This may be good political strategy in countries where the metropolitan population holds the key to governmental stability. However, it is now obvious that it has been very poor development strategy. It has reinforced dualism and inequality. It has retarded agricultural growth in many instances where such growth is a prerequisite to any other development. It has further worsened the imbalance created by the one-sided emphasis on infrastructure, heavy industry and monumental construction projects.

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[3] Distribution methods typical of the MDC (one-price-for-all, standardized packaging, homogeneous product offerings, etc.) are daily making greater inroads in the Thai system, as in other LDC. They are epitomized by some of the department stores, hotels and specialty stores opened in Bangkok in recent decades. Yet their penetration in the outlying municipalities and rural areas is fairly modest.

There is little consumer policy, there are still few consumer movements of significance, and there is next to no indigenous research on consumer problems in the Third World. Little is to be expected from the extant marketing system and the moribund gospel of unbalanced development. Prefacing the discussion of consumer policy one may say that the hope and challenge of the future is the linking, indeed the integration, of such a policy with the transformation of cryptocapitalist into open markets and an overall development strategy based on balance and popular incentives rather than imbalance and popular indifference. It is precisely in its capacity to redress the balance and generate popular motivation that consumer emancipation is a crucial element in successful economic development.[4]

Philosophies of Consumer Policy for the LDC and the Industrialized Countries

Consumer policy consists of measures promoting consumer interests taken by others than individuals. These interests are often seen as articulating five principal consumer rights: the right to consume freely, to choose, to be informed, to be heard and to be safe [13]. As we are all consumers, consumer rights are human rights. It need hardly be added that like all other rights consumer rights are not absolute, and that with every right follows a certain responsibility. From both a subject matter and a political value point of view consumer policy measures may be divided into consumer protection, education, and information.

Consumer protection is measures to safeguard consumer rights in cases where consumers themselves cannot be expected to enforce these rights. Consumer protection ranges from standards and other rules and regulations to maintain consumer health and safety via the control of deceptive practices and the handling of consumer complaints to competition policy aimed at maintaining open markets in the private sector. Consumer education provides the knowledge foundation necessary to develop citizens into intelligent consumers, or at least to make their self-development into emancipated consumers possible. Consumer information in a general sense comprises all data about individual products, brands, and models in the marketplace. The principal aim of education and information policy is to enable consumers to stand up for their rights. Clearly, the distinctions between protection, education, and information, while quite useful, are not hard and fast--nor need they be for the purposes at hand.

An overall philosophy of consumer policy is based on some notion of the relative importance of the different consumer rights. (An emphasis on the right to be safe suggests vigorous consumer protection measures, and so on). To arrive at a philosophy of consumer policy appropriate to the LDC our discussion of the ecology of the consumer marketplace and of cryptocapitalism should be kept in mind. It is also useful to consider Figure 2 which capsulizes that discussion in a comparative context including industrially more developed countries. The most urgent need is for consumer protection in a broad sense, ranging from health and safety concerns to product integrity and quality (specifics below). It would make little sense to give consumer information first priority in the LDC environment. Until random and ephemeral elements of the marketplace have been reduced by standards of product integrity and quality there is no real basis for information programs. It is true that in a sense most LDC consumers are information seekers--hence likely a responsive audience. But search perforce is focused on food and basic necessities rather than on the more complex products typical of the MDC marketplace. Pending greater prevalence of such products we would give the second priority in LDC consumer policy to consumer education, including elements thereof necessary to digest intelligently the information programs of the future. This ranking of policy priorities in the LDC is also indicated by the fact that they evidence a high proportion of educationally and economically underprivileged consumers--indeed, when it comes to consumer rights the citizens of most LDC are underprivileged! The first need of the underprivileged is protection.

In the MDC we have recommended a consumer policy based on information, education, and protection, in order of priority [10]. It is true, as indicated in the lower part of Figure 3 that different consumer groups may have different needs. We are proposing an overall policy mix most directly aimed at the Information Seekers, the group of MDC consumer sophisticates who more than fellow consumer groups serve as the watchdogs and opinion leaders of the marketplace. These self-reliant consumers also embody the ideal of consumer emancipation which to us is the self-evident ultimate objective of consumer policy. Thus, measures should aim at "upgrading" average and underprivileged consumers. It must also be remembered that in the MDC most consumers are fairly well aware of their rights, and the marketplace is one where a great deal more can be taken for granted than in the LDC. Most MDC already have a great deal of consumer protection, especially in the health and safety areas. They also have higher educational standards in general, though as yet there is little by way of obligatory consumer education. Consumer information, while available for the digging, is all too fragmented and often buried in a cacophony of background noise. The MDC badly need strengthened independent

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[4] This theme is developed in some detail in [12, chapters 12 and 13]. See also [1].

FIGURE 2. The Consumer Marketplace in Less Developed (LDC) and Western Industrialized (MDC) Countries

	LDC	MDC
Market Institutions		
System	cryptocapitalism, employment buffer	open market
System reputation	poor	acceptable (or better)
Level of trust	relatively low	relatively high
Infrastructure (transportation, adv. & mkt. res. agencies, etc.)	poor	rich
Credit at all levels	poor, expensive	available, rel. inexpensive
Consumer protection	nonexistent	well-developed
Transactions	bargaining	relatively fixed prices
Food retailing	bazaars, farmers' markets	supermarkets
Consumer		
Standard of living	poor	well-to-do
Values	fatalistic, easily satisfied	self-actualization, hard to satisfy
Nature of shopping	social	functional
Frequency of shopping	many trips	few trips
Shopping criteria	quality, style, product on hand to inspect, location of dealer	reputation of brand reputation of dealer
Awareness of mkt. functioning	fair	fair
Awareness of consumer rights	poor	relatively good
Mobility	fair	high
Products		
Type	necessities	discretionary
Variety	limited	proliferation
Buying decision	specific (exemplar)	generic (brand)
Imitations, fraud	frequent	occasional
Quality	variable	standardized
Safety	poor	good
Information Search		
Product focus	all goods	"shopping" & "specialty"
Sources	personal	impersonal
Independent info	little or none	obtainable
Nature of info	relatively ephemeral	relatively permanent
Perceived risk	high	low
Time premium	low	high
Effectiveness of search	low	relatively high
Seller Strategies		
Differentiation	personal	functional
Deception	ubiquitous	frequent
Sales volume, market share	don't rock the boat	increase
Shortcut Consumer Decision Rules		
High price equals high quality	widespread	widespread
Foreign product preference	common	common
Market System Performance		
Productivity	low	medium
Complaint handling	poor	medium
Information flow	poor	medium
Competition	weak	strong
Dispersion of benefits	narrow	wide
Contribution to economic growth	none	driving force

information programs, more systematically informative advertising, computerized consumer information banks, and so on. What we have said does not preclude the establishment of consumer advice bureaus in slum areas and other means of assisting the underprivileged.

FIGURE 3. Alternate Philosophies of Consumer Policy

	LDC	MDC
Protection	1	3
Education	2	2
Information	3	1

Industrially Less Developed (LDC) and More Developed (MDC) Countries

	IS	AC	UC
Protection	3	3	1
Education	2	1	2
Information	1	2	3

Consumer policy needs of the Information Seekers (IS), Average (AC) and Underprivileged (UC) Consumers in the MDC

Notes: Numbers indicate relative importance of major consumer policy elements, 1 of greatest importance and 3 the least.

Information Seekers in various MDC have similar demographic and, to some extent, behavioral and attitudinal characteristics [9]. Further research is needed to establish whether this is the case in the LDC.

A policy of indifference to consumers (USSR) needs no illustration.

Outline of a Consumer Emancipation Policy for the LDC

This outline of a consumer policy program for the LDC serves illustrative purposes only; greater detail is available elsewhere [6].

Consumer Protection

Product integrity. When a consumer chooses a product or a brand, he has the right to know that it is authentic, i.e., what any normal consumer would think it is. Imitation, fraud, dilution, and adulteration of products is nefarious to both consumers and honest sellers. Fraudulent behavior should be a public misdemeanor; it is clearly not merely a private matter for the seller whose product is being vandalized. LDC need much tougher trademark laws, and adulteration of products should be a crime.

Product quality. Four policy areas interrelated with product quality are intra-brand quality variation, minimum standards, quality marking, and standardization in a conventional sense. There is no answer to intra-brand quality fluctuations short of major improvements of quality control at the factory level. The LDC would do well to look to Japan here. Minimum standards have their most obvious area of application in assuring health and safety. Such standards on certain export goods may also be a valuable entry wedge to world markets, as in the case of Thai canned pineapples. In the LDC quality marking of consumer products is much more important than quality certification of industrial products customary in the MDC. To be of value quality marking of consumer goods must take into account all (or most) characteristics salient to the average consumer. Conventional standardization of nuts and bolts, light bulbs, railway gauges, and so on, is, of course, important in all countries. However, in some cases an LDC may wish to go further. The fact that there may be 150 different carburetor models in the MDC does not automatically mean that an LDC would do well having more than 20. Clearly, mandatory standards in a case like this brings excruciating problems of compatibility and fairness vis-a-vis brands excluded by the standards, and so on. Yet immediate and unlimited transfer of all offerings in all product areas from the MDC to an LDC may simply choke its marketing system. Here as in all standards matters it is critical that there is provision for periodic review and ample representation of consumers.

Deceptive practices. This, together with misleading advertising, is an area of gross abuse in the LDC. Here one might well adopt a local version of the British Trade Description Act which, in effect, lays down the simple principle that no vendor shall make a factual claim unless he is prepared to verify it. The Code of Fair Advertising Practice drawn up by the International Chamber of Commerce may be prevailed upon in developing fair advertising standards.

Complaints handling. Before we even get to this heading, infrastructure legislation of two types is needed. The basic right to complain must be made explicit as well as the conditions under which refund, repair, or replacement may be obtained. Warranty legislation needs to define what is understood by implicit and explicit warranties, and may indeed prescribe minimum warranty standards for certain classes of products. In the LDC it is imperative that the retailer be the agent primarily responsible for the handling of complaints, with recourse to wholesaler, manufacturer, and importer as needed and justified. There should be provision for binding arbitration and a central complaints board composed equally of representatives of buyers and sellers.

Health and safety is too large an area to be handled with any degree of adequacy here. It was touched upon in the context of product quality standards. The distribution of authority between the standards body and agencies oriented to such areas as food and drugs is an open question. In many countries, the latter products are subject to special treatment. In cases of product deficiencies endangering health or safety the agencies should have the power to order faulty batches recalled or, when the deficiency is endemic, to ban the product or brand involved. Whether or not appeal may lie to the courts, the agency should have the power to take emergency action on a temporary basis. We do agree with the IOCU that there are indeed cases of inappropriate products, although drawing the line here is certainly a hazardous matter.

Health and safety is the one area of consumer protection where many LDC are already making substantial progress. It is also one where there is ample international experience to build on.

Consumer Education

Education is bound to play a key role in any program of consumer emancipation. "Consumer civics" includes principally awareness of how the market operates, of budgeting, of the decisionmaking process in buying, and of consumer rights and responsibilities. Special attention should be paid to the rights and responsibilities, as they will largely be new to the audience. Consumers must be made aware that unless a good number of them actually make use of the consumer rights, these rights are doomed not to be respected by sellers. For many topics there are excellent materials already available in the MDC, which may be used after suitable adaptation. Some topics should be given special emphasis, such as issues concerning family planning, corruption, product quality, and health and safety. Similarly, consumer educators should discuss information sources available to consumers and how to evaluate information.

In the area between education and information are buying guides advising consumers what to look for in a certain product (or class of products), what relevant buying and use criteria may be, and so on. It is highly desirable that such guides be prepared by an independent party and distributed freely in schools and stores.

To the extent that general education brings not only literacy and arithmetic but also strengthens the capacity of independent thinking and critical evaluation it is basic to consumer emancipation. However, the experience of the MDC manifestly demonstrates that general education is not enough. Research suggests, for instance, that in the United States over 25 percent of all adults are "functionally illiterate" as consumers. The MDC need obligatory consumer education in the schools, though only a handful have got it. Clearly, this need is even greater in the LDC. Avoiding formalization consumer education should make use of such inexpensive tools as buying guides, comic books, tape cassettes, and games. Special attention must be given to those already out of school and to continuing education. In the LDC the self-evident medium is radio. Many short programs are much to be preferred over few long ones. Short TV spots would doubtless be of great value.

Consumer Information

It is true that we have assigned a lower priority to consumer information than to protection and education in the LDC. But it is still very important, not only for consumer emancipation but also as one of the more powerful means of bringing about open markets in the private sector. Our key recommendation is that the LDC government initiate an independent consumer information program. Such a program has intrinsic merit in an environment where biased and misleading information has held sway only too long. But it is also likely to have an important extra benefit in helping to improve the quality of advertising. This is especially the case when sellers incorporate the labels and quality marks generated by the independent program into their advertisements and sales promotion materials.

The independent information source should take the form of a combined information labeling-quality certification (IL-QC) program. As such a program is described in great detail in [13] there is no need to delve into it here. A combined program is recommended, in that the two elements serve different purposes. The labels will be of primary interest to the IS, and should help materially in converting them into the kind of vigilantes which open markets need to persist. Average consumers would be best served by a two-tiered quality marking scheme (such as a green and gold seal indicating "good for everyday use" and "extra quality," respectively). Though the government should be the sponsor of the IL-QC program, and should reserve the right to decide in what cases it will be mandatory for producers to join it, it is of utmost importance to credibility that it be administered by a pluralistically composed, independent agency--possibly a branch of the standards body. There are great scale economies in a joint IL-QC program; however, if resources are insufficient the place to start is clearly with the QC part.

It is strongly recommended that sellers be obliged to post prices for all their goods, in order to reduce gradually the necessity for bargaining and to facilitate comparative shopping and open competition in the marketplace. Finally, the names of firms not honoring just complaints should be made publicly available.

Consmmer Policymakers

By now it should be apparent that in most LDC the main initial burden of making and enforcing consumer policy will fall on governments. Unless government takes the lead role consumer emancipation is not ever likely to come about either under cryptocapitalism or in tightly managed economies. After long years of repression, the level of consumer consciousness is simply too low. However, the makers of consumer policy include consumer associations, women's councils and other citizens groups interested in consumer affairs, business, educational institutions, and the mass media. Influence should be brought to bear on local subsidiaries of multinational corporations to participate in consumer emancipation activity. The MNC have both the talent and the wherewithal to play a constructive role if properly harnessed. Generally, the cooperation of nongovernmental organizations is indispensable from the outset, and the role of these organizations relative to government will grow as the overall framework of the new order of consumer affairs has been established and consumer consciousness is developed.

LDC Consumer Policy: Epilogue

A consumer policy program for the LDC has been proposed, based on protection, education, and information, in that order. The prime purpose of such a program is to establish the elementary human rights of citizens as consumers. In turn, consumer emancipation will greatly reduce the current high-uncertainty, high-risk market environment. It will save millions of consumers from making many million unnecessary mistakes in allocating their meagre resources. By placing buyers and sellers on an equal footing it will promote an open market system in the private sector. Open markets have amply demonstrated their potential for changing people's motivations and aspiration levels, thereby becoming a driving force in balanced economic development at a pace considerably more rapid than we have seen in the many LDC placing their faith in the received gospel of one-sidedness.

In the LDC the emphasis must be on low-cost policies with modest enforcement requirements. We have had these criteria in mind in developing our recommendations. Arbitration panels, minimum product standards when needed (often adaptable from MDC experience), consumer information programs of the combined labeling-quality certification variety, and a requirement that retail prices be posted are examples of cost-efficient, high impact policies. We might add that modest subsidies to consumers' associations and experimentation with consumer advice bureaus in population centers have high payoff potential [4].

There are many specific features of consumer policy for which the LDC might make good use of the MDC experience. Yet we must warn against indiscriminate technology transfer in this area as well as many others. As has been shown, the environment where consumer policy operates is dramatically different in the MDC and LDC, and the same thing applies as between the many LDC. It would be a great pity if the UN and individual LDC were to become heavily engaged in policy formulation without an adequate research base [5].

A final word of caution: It is inevitable that many consumer protection measures will involve direct regulation of consumption. Such measures typically also express the view that the policymaker (public or private) knows better what is good for consumers than they do for themselves. Education and information, on the other hand, are ultimately based on the view that people as consumers can and should decide for themselves what is best for them. Clearly, this is the more genuinely emancipative view. In the long run, therefore, the consumer policy emphasis should shift to information, education, and protection, that is, the order we have recommended for the MDC.

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IOCU--A NEW FORCE IN INTERNATIONAL CONSUMER POLICY

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ABSTRACT

As an increasing number of consumer issues transcend national boundaries, the International Organization of Consumers Unions (IOCU) has emerged as a growing and forceful voice. IOCU and its offshoots, including Health Action International, the International Baby Food Action Network and the Pesticide Action Network, have advocated the consumer point of view on several major consumer health and safety questions.

I want to tell you about consumers outside of the United States who have taken the offensive over the last several years--about their development, their initial successes and their future. Today, the international consumer movement is a growing force, growing indeed at a time when such a force is sorely needed. More and more consumer issues transcend national boundaries. They become the concerns of consumers and of consumer organizations in many countries and in many parts of the world. Most fortunately, there is an international consumer organization--an organization of which ACCI is a part--that has united consumer organizations everywhere.

The organization is the International Organization of Consumers Unions (IOCU). In June, 1981, during its Tenth World Congress, in The Hague, IOCU celebrated its twenty-first birthday. Founded by five consumer organizations--from the United States, United Kingdom, Australia, Netherlands and Belgium--it has grown to a membership of 115 consumer associations in 47 countries. It includes, in addition, bodies supported by governments, family organizations and labor unions. The first president, and one of the moving forces behind IOCU was CU's own--and ACCI's own--Colston Warne.

I'm pleased to say that both Consumers Union and ACCI are members of IOCU, as are the Consumer Federation of America and other U.S. consumer interest bodies.

The history of this remarkable organization is the history, as well, of the international consumer movement. IOCU, formed in 1960, was a body created largely to promote cooperation in the testing and information work of independent organizations. In recent years, it has transformed itself into an international organization that also speaks in a forceful voice on international consumer issues. Its geographical base--primarily in Europe until 1974--has expanded to include a dynamic regional office in Malaysia, for consumer development in Asia and the Pacific. Its headquarters are in The Hague.

IOCU today promotes international cooperation in the comparative testing of consumer goods and services. It acts as an information source and clearinghouse, with regular publications. It represents consumer interests in international bodies: it has consultative or liaison status with more than a half dozen international agencies. It promotes the formation and development of new consumer organizations, especially in developing countries. And, most significantly, it fills a new and vital need as a forceful international consumer advocate.

Financial support for IOCU comes from the dues of its members, and occasional foundation, government, or United Nations grants for specific projects.

Since 1974, the Regional Office for Asia and the Pacific, in Penang, Malaysia, has worked assiduously and with great skill to assist the development of consumer organizations in that area. Through newsletters, workshops, seminars, correspondence and personal contact, it has spurred the growth of the consumer movement, providing the necessary support for fledgling organizations. It has also spearheaded consumer advocacy on issues where consumers of developing countries have a particularly vital stake.

A twenty-first birthday is often regarded as a milestone--a coming of age. One may say that about IOCU. In its infancy, it played an absolutely essential role as a clearinghouse and collegial body for the testing organizations. As it matured, it recognized the needs of consumers in the developing nations, and so the Regional Office for Asia and the Pacific was created with funds from the Consumers' Association of the U.K. and Consumers Union of U.S., Inc.

IOCU was born in 1960, but came of age in 1981. By then, there was a dramatic need for a new kind of consumer organization; not only a clearinghouse and coordinator; not only an aid to development; not only for technical assistance and support. By 1981, it was clear that consumer issues had become internationalized, and that an international consumer advocate was needed. Two major threats to consumers everywhere in the world had become top priorities for IOCU: improper marketing practices, and the worldwide trade in hazardous products.

Dangerous products, poorly made products, inappropriate products, and deceptively marketed products were not confined by national boundaries. They traveled beyond those boundaries, so that the acts of one corporation could harm consumers in many distant lands. Marketing practices devised in one country deceived and manipulated consumers who lived continents away. The needs of poor consumers in developing countries were linked to those in the developed nations as well.

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[1] Executive Director
[2] Vice President

A consumer response was necessary to the production and marketing practices of multinational corporations, and to the new strength of international business organizations and lobbies of all kinds.

In November, 1973, over nine years ago, IOCU had called the attention of the United Nations to the many dangers posed to the consumer interest by multinational corporations. We noted their various impacts on national economies. Such corporations, we said, pursue private interests on a global scale, but were not accountable to any authority which matched their geographical reach or represented the many interests, including consumer interests, that they affected.

By 1981, this had become the major issue of the worldwide consumer movement. IOCU was ready to meet this challenge.

The first major international campaign undertaken by IOCU was the fight for an international code of practice to control the promotion of breast-milk substitutes in the Third World.

For over a decade, health professionals and consumers have protested the way in which manufacturers, such as Nestle, advertise and distribute infant formula.

These practices included aggressive promotion, to mothers of newborn babies, of formula, as a substitute for nursing. Using the most persuasive language, advertisers sought to convince mothers that it was highly desirable to substitute infant formula for breast-feeding. Free samples were distributed by the companies to new mothers, sometimes by sales personnel dressed to look like nurses. The New York Times (May 24, 1981) noted that the need for a code of practice was prompted "by persuasive scientific evidence that bottle feeding is associated with unusually high levels of infant disease and death, particularly in poor, primitive regions where commercial infant formulas are often mixed with polluted water or are diluted to the point that infants are malnourished."

As early as 1971, IOCU called for an international code of practice to control the promotion of such baby foods. In 1979, IOCU participated actively in a Joint World Health Organization (WHO)-UNICEF Conference. IOCU's concern over these unconscionable anti-consumer marketing practices and the concern of other public interest groups present at this meeting led to the launching by IOCU's President, Anwar Fazal, of the International Baby Food Action Network (IBFAN), in which IOCU continues to play a leading role. The 1979 WHO-UNICEF Conference outcome was a set of recommendations calling for the drafting of a Code of Practice regulating the promotion and marketing of breast-milk substitutes. Infant food companies lobbied vigorously against the code. Nevertheless, representatives of 118 countries, from the very poor to the very rich, capitalist and socialist, joined in Geneva in May of 1981 to approve the voluntary international code. The United States, I regret to say, cast the only vote against the code.

Present at the Geneva meetings, as leading speakers, organizers and fighters for the consumer interest, were IOCU representatives, including our President, Anwar Fazal. IOCU, with IBFAN, provided consistent and effective advocacy of the consumer position, and a consumer hand in the actual drafting of the code. It was a significant event for IOCU, and the forerunner of its program for the 1980's.

Voluntary international codes, as we all know, have great limitations. The international consumer organizations certainly did not rely on the code, but persisted in intense activism on this issue. On the education and information side, IOCU has vigorously promoted a variety of programs on breast-feeding in developing countries. Indeed, members of the cast of the Lou Grant show toured several countries in Asia and the Pacific with staff of the IOCU Penang Office, to help heighten consumer awareness of the benefits of breast milk. And equally important, member organizations in individual countries have maintained pressure on formula manufacturers, especially Nestle, including the sponsorship of boycotts.

The projects announced at the 1981 IOCU Congress all bespoke our intention to extend the force of the international consumer movement. Most notable was a Consumer Interpol, funded by a major grant from the Netherlands government, and announced, to great applause, in the address to the delegates by Prince Claus of the Netherlands. The Consumer Interpol is, quite simply, an international hazardous products warning network, managed by IOCU, and working through member organizations and others in each country.

It is a daring and ambitious effort--and still in the process of being developed. It is one way consumers can protect themselves from the dumping of hazardous products across national boundaries. The Interpol will be an information exchange, an alert system, and a basis for local, national and international campaigns to protect consumers against hazardous products.

The need for such an Interpol has long existed, as IOCU and the Natural Resources Defense Council, a major environmental organization, made clear in a statement to the UN Commission on Transnational Corporations in August, 1981. This is what we said:

"The developed nations still account for a very high percentage of the world's production and export of chemical substances used in agriculture, medicine, and industry, and by the consumer. Particularly since the Second World War, developed countries have acted to reduce domestic dangers to public health and the environment posed by these substances and have removed from products and substances. Many developed nations, however, permit the manufacturer to ship these same goods overseas to often unsuspecting foreign customers and countries. In addition, there are generally no standards imposed by the developed nations or the international community as to the marketing practices of transnational corporations regarding dangerous products.

"Although no nation alone can adequately protect its citizens and environment from the mounting international commerce in dangerous substances, the developing countries are particularly vulnerable to hazardous exports from developed countries. Developing countries are viewed as a secondary market, where the lack of effective health and environmental laws encourages the dumping of dangerous or ineffective products."

There are many examples. Here are just two:

A 1979 IOCU survey in several Asian countries showed that a number of multinational food companies were marketing their sweetened condensed milk products as infant food. One was a British company, although the use of sweetened condensed milk for infant feeding had been banned in Britain for decades.

And we all remember TRIS. When children's sleepwear treated with TRIS was banned in the U.S., over 2 million pieces were exported for sale to unsuspecting consumers in other countries.

There is, unfortunately, no international system to protect consumers, and no comprehensive international hazard alert system. Just a few months ago, the UN General Assembly adopted a resolution asking that banned products be exported only when the importing country requests it, or permits the specific product to be consumed. The resolution also called for a list of banned, restricted and non-approved products to be compiled. While some international programs provide some information, the consumer is truly vulnerable.

The protection of the consumer from health and environmental hazards is--or should be--a government function. To protect the consumer, we need not only government information, but government control by the exporting and importing nations. We need international codes with teeth to regulate the marketing conduct of producers. We especially need decisive action by the governments of developing countries, to protect their own citizens.

But such programs are not likely to be developed in the near future. Indeed, in the United States, which exports hazardous products, waste and technology, one of President Reagan's first official acts was to repeal the Executive Order on this subject adopted by former President Carter, which would have provided a greater degree of protection to consumers in foreign countries.

In May, 1982, the Departments of State and Commerce issued a report recommending that the U.S. repeal some of the remaining protections, including the existing export-specific notice for banned toxic substances and pesticides, and that it lift the 44-year-old prohibition against the export of unapproved pharmaceuticals. As a replacement, they advocated that protection against hazardous exports be reduced to a State Department notice to foreign governments of all actions banning or restricting domestic commerce in any hazardous substance, and an annual compilation of this information. The reason: export-specific notification is burdensome and unsuccessful. Industrial nations they say, have little need for such notice, and developing countries lack sufficient scientific or technical capability to use the notes effectively.

I'm proud to say that IOCU member organizations abroad have been mobilized and have written to President Reagan. He has heard from consumer organizations in Australia, Ireland, the Philippines, Zimbabwe, Denmark and Nigeria. We doubt the President has been moved, but the international response is a beginning.

The independent sector, clearly, has a vital role to play, and it must be a forceful one. Through IOCU's Interpol, we are uniting information with action and advocacy. By joining in these efforts, each individual consumer organization, in each country, can help protect consumers in that country far more effectively than if it acted alone. And consumer organizations in different countries, by acting jointly, can compound their strengths.

No one underestimates the difficulties in developing this Interpol. The modest resources of IOCU members and the other Interpol participants will be pitted against the virtually unlimited funds of many multinational corporations and against the indifference or impotence of many governments. Yet, while it is still quite new, there is ample evidence that the Interpol has caused concern on the part of some marketing organizations. Our goal is to cause so much concern that anti-consumer marketing practices will be corrected by the sellers or regulated by the appropriate international bodies and national governments.

While we work to fashion the Interpol into an effective consumer weapon, another IOCU-sponsored activity has also been launched to affect multinational marketing practices.

Health Action International (HAI) was organized in Geneva in May, 1981. An informal cooperating network of more than 50 consumer and other public interest groups, its particular interest is worldwide pharmaceutical issues. The multinational drug companies frequently sell their products without concern or respect for the needs of the consumers. Drugs are sold in less developed countries without the instructions, limitations or labelling which developed countries require as essential for the health of consumers. Drugs banned or restricted as hazardous in the developed nations are sold to Third World markets. Useless drugs are sold, wasting scarce resources. Not only patients, but even doctors, receive inadequate or misleading information from drug companies. IOCU was a leading organization in the formation of the HAI network, and IOCU resources play a key role in its work. IOCU serves as a central clearinghouse, and publishes a newsletter to serve the HAI network. Grants have been awarded by a Japanese foundation, and Danish and Swiss-based development agencies, to further HAI's work.

We believe HAI will have a significant impact. A U.S. drug industry newsletter, The Food and Drug Letter, on July 17, 1981, seemed to agree. It reported that multinational firms are taking the movement seriously. It noted that WHO's adoption of the infant formula code "has provided an indication of the potential power of the multinational consumer group movement." I believe that, too.

One HAI member has already scored a small, but notable, success. An active United Kingdom public interest group, named Social Audit, had published what it called an "anti-advertisement"--an attractive and strongly worded leaflet--containing counter-information against the anti-diarrhoea drug, Lomotil. Since 1973, it has been contra-indicated in the U.S. for children under the age of two. In spite of this, G.D. Searle, the manufacturer, had been selling it for children as young as three months in Asia and Africa. Searle agreed, after a meeting between its representatives and Social Audit, to revise its labelling to indicate clearly that the product was not recommended for use by children under age two.

Another notable IOCU/HAI success was against CIBA-Geigy, manufacturer and seller of Clioquinal --in the U.S. Entero-vio form--which is reported to have caused severe neurological damage to over 10,000 users. Seven years after IOCU published a survey damning the product, and after a concerted campaign by IOCU, HAI, and activists in Japan, including "anti-advertisements" in many languages, Ciba-Geigy agreed in November, 1982 to progressively recall the product.

While the marketing practices of pharmaceutical companies have attracted the most attention, IOCU plans to focus on the pesticide issue as well.

To address this vast and troublesome problem, IOCU is actively involved in setting up a new network--the Pesticides Action Network. Its objectives are to increase the awareness of independent organizations regarding the structure and practices of the global pesticide industry, to identify key issues, and to stimulate and strengthen joint action.

IOCU's program for the 1980's is ambitious, but achievable. The new international campaigns can be effective in their own right. More than that, they can stimulate and assist the work of local and national consumer organizations within national boundaries. Coupled with IOCU's dedication to service as an information source and clearinghouse, and as an aid to developing consumer organizations throughout the world, they present a vigorous program for international consumer protection and development.

Underlying all of it is the determination that, as the marketing of consumer products has crossed national boundaries, consumer protection and advocacy must be international as well. National boundaries must not be permitted to become artificial limits to the moral obligations of producers and sellers. A human being's right to life, health and safety is a right every bit as precious as the fight to be free of political oppression.

The consumer movement started within each country as a movement for social and economic justice. IOCU has become a force that seeks that justice for consumers on a worldwide basis. And American consumers can take heart from the fact that the American consumer movement is part of a growing world force--one whose vigor and strength has begun to make its mark. We have lots of important work to do in the years to come, and the conviction and the organization to do it.

THE POLITICS OF CONSUMER REGULATION: THE PUBLIC RESTRAINT OF PRIVATE GREED

Michael Pertschuk, Federal Trade Commission, Washington D.C.[1]

Two years ago, those unofficial coroners of public impulses, the poll takers, pronounced the consumer movement dead on arrival at the threshold of the '80's.

The remnants of the consumer groups recalled Tom Lehrer's sad-sack "Folk Song Army" -- we had all the good songs but we had lost all the battles.

As Ronald Reagan was inaugurated, a contemporaneous Harris Poll indicated that the majority of voters (65-29%) resonated agreeably to Reagan's vow to peel the government from the backs of business. Harris also found that a 54-38% majority -- apparently without regret -- viewed the consumer movement as "running out of steam."

Now -- two years of Reagan and his regulators -- the gang that can't rule straight -- has apparently done for the consumer movement of the '80's what Ralph Nader did two decades earlier, though neither is likely to cherish the comparison.

On the second anniversary of Reagan's inaugural, last January 20, pollster Louis Harris told the annual national Consumer Assembly in Washington that "a clear-cut 55-36% now reject the notion that the consumer movement has run out of steam."

"Indeed," Harris told the reviving delegates "by a sizable and convincing 80-15%, the prevailing view of the American people is that unless they keep fighting, consumer groups may begin to lose what they have achieved."

The American people are right.

A goodly number of Reagan's regulators have now spent two years doing to the public precisely that which in private incarnations (as lawyers, flacks, lobbyists and business cheerleaders) they tried to do to the government. Others are plainly honest, if limited, men and women, who truly believe that business liberated from odious government constraints will follow justice and fair dealing all of its days.

Throughout the breadth of the Federal government, the Reagan administration has brewed a poisonous admixture of crude freemarket ideology and corporate sycophancy.

Consumers were bugs on the Reagan windshield of regulatory removal. (With all the subtlety of Jane Byrne clearing the snowbound streets of Chicago in an election year, the Reagan regulators set to work plowing up the national framework of consumer regulation.)

Laws against deceptive and unsubstantiated advertising, against unsafe and defective products, against retail price-fixing -- are scorned as economically unsound restraints on market innovation. Consumer law enforcement staffs have been dismantled or decimated by budget cuts. Actions against violators are leashed, pending the satisfaction of exotic conservative economic theories about the evils of government intervention in the marketplace.

A modest example: The Federal Trade Commission's Seattle Regional Office was all set to insist upon the recall of potentially defective survival suits worn by oil rig workers and seamen working on rough seas.

"Wait!" cried a Commission economist, whose assigned task it was to forestall precipitous action: Perhaps there will be a few drenchings or drownings, then a few lawsuits. Who knows, the market in survivial suits may well be self-correcting. Recall negotiations were halted.

In New York City when the cops in their patrol cars at night pull into a quiet corner, dip their caps down over their eyes, and nap; they call it "cooping." Well, throughout Washington's regulator agencies -- Reagan's cops have been cooping!

And what the Reagan administration left standing, a Congress enthralled with business "Political Action Committees" (PAC's) set to work undoing. The 97th Congress sunk from Nader to nadir with its veto in May 1982 of the FTC's pale shadow of a used car defect disclosure rule. By the fall of 1982, the House of Representatives was poised -- with 219 proud co-sponsors of the American Medical Association's pet amendment -- to perform what Senator Warren Rudman (R-N.H.), protesting, called a "frontal lobotomy" on the FTC, erasing the Commission's authority to prosecute antitrust violations and consumer fraud among any professionals smart enough to earn graduate degrees and politically organized enough to secure a state license.

This was the grim political landscape that the delegates to the Consumer Assembly surveyed as they gathered earlier this year. Yet the theme of this year's Consumer Assembly was bold: "The Consumer Movement Takes the Offensive." Was that a sober charge to a waiting army -- or puffery? To be sure, Louis Harris confirmed that the consumer cause was a truly popular cause. But a cause is not a movement. And how in the cold light of regulatory politics could a rag-taggle coalition of community groups, older Americans, cooperatives, sorely distracted labor unions, consumer advocacy groups and leaders hope to overcome the combined force of a politically mobilized business community basking in the warm embrace of an ideologically attuned -- if not sycophantic President and Congress?

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[1] Commissioner

Indeed, there persists a suspicion among business leaders, that the "consumer movement" is a sham. "It may not be absurd to argue," argues Robert Shapiro, president of G. D. Searle's NUTRI-SWEET division, "that the consumer movement exists almost exclusively in the person of Ralph Nader. We had been consuming for some time, and our ancestors before us; but there was no consumer movement until Nader created it in the 1960's; and it is not wholly unreasonable to speculate that it would vanish without him."

It is, of course, true that the notable consumer achievements of the sixties and seventies were largely Washington-focused and centered: new and tougher Federal laws, and unaccustomed vigor in regulatory agencies. Ralph Nader was perceived, both by admirers and critics, as a lone champion of reform rather than a leader of a movement. Yet Nader might have moved some Congressmen to sympathy but not Congress to action, had not a majority of the Congress perceived that the public supported restraints on corporate overreaching and neglect.

Nader tapped smoldering public resentment at a growing list of consumer abuses: defective products backed by evaporating warranties; cigarette commercials that promised bliss and delivered cancer; autos and toys, so casually designed that they neglected elemental safeguards against maiming and killing; phony or distorted advertising claims; the persistent marketing of useless drugs -- or worse, useless and hazardous drugs. These and other accumulating consumer blows converged to evoke the elemental cry of the ripped-off consumer: "There Oughta Be a Law!"

Ralph Nader and other consumer leaders struck a responsive chord among the American public because they spoke for the frustration of the individual who felt buffeted by unresponsive institutions -- government and business.

The consumer impulse of the sixties and seventies -- perhaps not quite a movement, but not just another "special interest" -- can perhaps best be viewed as a stirring of what philosopher William M. Sullivan calls in his book Reconstructing Public Philosophy, the American "civic republican" tradition, the pursuit of the "common good".

To be sure, the objectives of consumer activists -- economic justice and consumer safety -- are broadly self-interested.

And consumer advocates have from time to time indulged a mean spirited, populist animus toward "big business."

But consumer issues have mostly engaged the participants not as narrowly self-interested economic players but as citizens striving for the betterment of community and society.

As Sullivan observes of the kindred civil rights and environmental movements, its participants have been "motivated by a combination of self-interest and a great deal of disinterested civic concern."

The consumer movement is not a revolutionary movement; but it is a disturber of the peace. It is especially disturbing to those now in philosophical high fashion and in power in the Reagan administration, who view all public conflict as the combat of the self-interested, and government as only the inept and corruptible referee of the warring greedy.

The consumer movement has been especially a disturber of those whose material good fortune convinces them of their own virtue and economic entitlement.

"All anyone ever wants," Senate Commerce Committee Chairman Warren Magnuson used to say at the end of a long wearying day listening to the pleas of lobbyists, "is a fair advantage!"

As Sullivan and others have begun to argue, this vision of the individual as bounded by self-interest, and government as broker of last resort for channeling the sum of individual self-interests, represents the exhausted, failing vision of the neo-conservatives:

- Failing, because only an explosively expanding economy could ever hope to satisfy the sum of individual self-seeking;
- Exhausted, because it fails to account or the experience which teaches that humanity finds its most satisfying expression in the pursuit of common needs, through political and civic participation in the larger community.

When Robert Lekachman entitles his indictment of the Reagan administration, Greed is Not Enough, he captures the essence of the consumer movement, as well as the Achilles' heel of Reaganomics.

A strong sense of community values permeates the consumer movement: truth, reciprocity, trust, fair dealing, equity. The antipathy of consumer groups toward such practices as credit discrimination against the elderly or women or non-whites, or toward advertising that exploits or deceives children, is motivated not so much by the drive to increase the consumer's share of the economic pie at the expense of producers as by a sense of moral outrage at the breakdown of ethical norms. Fairness and truthfulness, whether in advertising or in the most intimate of relations, are not merely necessary elements of efficient marketplace transactions; they are the essence of civil relationships in an interdependent society.

But what evidence is there that these sentiments find expression in the political behavior of ordinary citizens? Let's take a look at last November's congressional elections.

On September 23, 1982, voters in the Republican congressional primary, in upstate New York's (33rd) district, got mad at their Congressman, Gary Lee. Now Mr. Lee's name was not exactly a household word, even in his own congressional district. But thanks to Common Cause and Congress Watch, (the Nader affiliated lobby) the voters in Syracuse learned that Gary Lee had become the special interest champion of both the used car dealers and the doctors and cheerily took their Political Action Committee contributions. Lee's defeat (by 354 votes) may not rank as a political convulsion, but it "sends a message," said the New York Times. "Opportunistic congressmen who flack for special economic interests may wind up paying with their jobs."

Meanwhile, out on Long Island, volunteer canvassers for the Citizens/Labor Energy Coalition were knocking on 30,000 doors in Smithtown, Long Island, asking, "Did you know that your Congressman, John LeBoutillier, took campaign contributions from oil companies and voted to take the lid off natural gas prices next winter?"

And conservative Smithtown, which went 60 percent Republican in 1980, went 61 percent for challenger Robert Mrazek, a Democrat and an unabashed consumer advocate, in 1982.

Of eight races targeted by the Citizen/Labor Energy Coalition, six endorsed candidates won.

By contrast, in 1981 and 1982, the National Chamber Alliance for Politics, a part of the United States Chamber of Commerce, riding the crest of its political triumph in the 1980 election, targeted 112 "business opportunity" races. Of those Chamber-backed candidates, only 50 (45%) won, down from 70% in 1980.

In the other corner, of the 94 congressional candidates endorsed by the Consumer Federation of America, 77 won; of the 81 members who are no longer with us, 60 had worse than average consumer voting records, in CFA's judgement; 34 of the 81 defeated House incumbents had poor consumer voting records; 32 of the 34 had vetoed the used car rule.

In 1981, the late Washington Star thought it detected in the Reagan landslide a "public howl" of indignation against consumer regulation. But in 1982, no sitting congressman or senator was perceived to have been ousted for defending consumer, environmental, health or safety regulation and no challenger rode to victory decrying regulation as the chief bane and scourge of our society.

Now it would appear that Congress, if not Reagon, would have received a clear message from the electorate in November. Perhaps it did.

In the closing hours of the 97th Congress, at 5:15 in the morning of December 16, to be precise, Senators James McClure (R-Mont.), and John Melcher (D-Mont.), insisted upon a vote on the AMA's amendment (which they had co-sponsored) to exempt professions from the Federal Trade Commission Act.

For months Senator Howard Metzenbaum, (D-Ohio) the consumer's Horatio-at-the-bridge, had threatened to filibuster any attempt to hang the AMA amendment as a rider on bills passing through the Senate. The AMA's private vote counts, taken before the election, had suffused the AMA lobbyists with optimism. They had invested more than $3,000,000 in the Congress and here, in the waning hours of the lame duck session, they were pressing for a showdown on their priority objective.

A strong succession of diverse speakers rose to denounce the AMA amendment: Senators Packwood, Gorton, Metzenbaum, Proxmire, Kennedy, Eagleton, Durenberger, Chafee, Heinz, Levin.

Finally, Warren Rudman, the Senator from New Hampshire, who had the day before led a successful fight in the Appropriations Committee against the McClure amendment spoke:

> I noticed something very interesting in the last week. For the first time since I was a boy in New Hampshire, doctors are making house calls. They made house calls in the Dirksen Building, they made house calls in the Russell Building. They are so concerned about our health that the reception room is packed with them, and I say we ought to give the American people a break.
>
> As they trudge down the steps, discouraged and disheartened because we did the right thing, as they get into their Mercedes and Porsches and drive back to their suites in the Madison, let us give the American people a break. Let us regulate those things which need regulation. Let us regulate anticompetitive practices.

Rudman wisely refrained from adding that the doctors' defeat would be a bitter pill for the AMA, but a tonic for the consumer movement.

The AMA amendment lost and lost badly, 59-37. That last gasp of the 97th Congress may go down in history as the "Lame-Doc" session.

Where does a renewed consumer movement go from here?

The consumer crusades of the sixties and early seventies were uncomplicated by doubt. The economy was flush and expansive. In demanding minimum auto safety standards and defect recalls, consumer advocates didn't have to worry about GM's entrepreneurial robustness or the livelihood of auto workers and their communities. Indeed the unions -- true to labor's traditions -- were the backbone of the organized consumer movement.

Now, it's not so easy. Consumers may bristle at the efforts of business to lay the effects of its own neglect and shortsightedness at consumerism's door. (Compliance with U.S. safety and air pollution standards hardly inhibited flourishing Japanese enterprise.)

Still, to the extent that the consumer movement truly aspires to both economic well-being and civic justice, its righteous outrage at consumer abuse must now be tempered with genuine concern for failing or thwarted enterprise and attendant high unemployment.

But heightened sensitivity to the pain of workers and the rehabilitative needs of productive enterprise does not dictate the abandonment of principles which have long guided the consumer movement.

Indeed, most often the fundamental interests of consumers and a healthy economy coincide. Ironically, it was stringent, government-enforced, quality control standards that nurtured the growth of Japanese consumer product firms -- to the mutual benefit of both Japanese consumers and the international competitiveness of Japanese products.

While American industry ritualistically resisted all efforts by consumer advocates to insist upon minimal performance standards for products, Japanese industry embraced such standards -- and prospered.

And for those who now grasp as an industrial panacea the "loosening" of the antitrust laws so that united American cartels can go forth to do international combat -- it should at least give pause to note that the Japanese automobile industry honed its competitive edge on the fierce domestic rivalry of no less than nine independent automobile manufacturing firms! This, while our big three, dominating the domestic market, grew sluggish.

Those who have studied European industrial policy with its encouragement of mergers and the anointing of corporate "National Champions" have concluded that, invariably, the national champion fails to penetrate international markets. But it does succeed in exploiting a monopolized domestic market to the detriment of both domestic industry and domestic consumers.

But hard times demand that consumers listen with open minds to the pleas of their friends and allies in labor, as well as to others, for the development of new industrial policies which promise the restoration of a health economy.

It may indeed be prudent and justified to provide narrowly focused, temporary relief for certain industrial segments.

The consumer interest is entitled at least to a place at the bargaining table. The consumer must be heard to argue for the proven virtues of open trade and competition.

Where the case for protection has been made -- or at least politically won -- the consumer must be heard to argue for its least costly forms and to insist upon a quid pro quo from both business and labor: from the businesses benefitted, a contractual commitment to productive reinvestment; from workers, a commitment to enhanced productivity.

It is the role of the consumer movement not only to insist upon a place at the bargaining table, but to keep insisting that the development of national economic policy affecting consumers be open to broad public scrutiny and that the consumer interest be heard and heeded.

For the revived consumer movement, the agenda is full.

The Reagan anti-consumer binge is only half spent. Preserving the fundamental framework of consumer protection and antitrust laws erected over more than fifty years will continue to occupy consumer groups until the Reagan administration ends.

Campaign finance reform must share the top of all citizen group agendas. No citizen interest is more vulnerable to the bureaucratized plutocracy of the PAC's than the consumer interest.

The defeat of the AMA was soul satisfying. But the sad lesson is that the AMA got so far with an effort of so little merit -- and in the face of an ecumenical coalition that encompassed David Stockman and Ralph Nader, the Consumer Federation of America and the American Enterprise Institute, Fortune 500 corporations, the American Association of Retired Persons, the nurse midwives, steelworkers, opticians, and Reagan's FTC Chairman James C. Miller III. In the face of such opposition, can there be any doubt that congressional debts to the AMA for contributions past and the promise of more to come played a major role in making the AMA amendment a credible threat? Consumer's lives and pocketbooks will not be secure until campaign pockets are sewn up.

Finally, consumer leaders must continue to seize back from Mobil Oil and the libertarian economists the symbols of debate. They must make it clear that their concerns are neither narrow nor trivial nor incompatible with a society under economic stress.

The consumer movement is not anti-business. The true creative entrepreneur is as much a consumer hero as the advocate.

The consumer movement does not stand for excessive regulation or centralized bureaucratic excrescences. Consumer leaders have joined and led regulatory reform efforts.

The consumer movement does stand for responsive government intervention in the marketplace: "the public restraint of private greed."

The consumer movement *does not* stand for a patronizing "consumer protection" to protect consumers against their own informed choices.

It *does* stand for free choice among enlightened consumers.

Despite the efforts of Reagan's deregulators to convince the American public that government has no legitimacy in enforcing standards of responsibility and fairness, the American public won't buy that lemon.

For indeed the consumer movement *has* "the good songs." And, in the future, it is not going to lose all the battles.

CONSUMER AND ECONOMIC EDUCATION RECOMMENDATIONS FOR POLICYMAKERS

Janice Holm Lloyd, Michigan Consumer Education Center

ABSTRACT

The U. S. Office of Consumers' Education awarded a contract to the Michigan Consumer Education Center in late 1981 for the preparation of a handbook for state and local school policymakers across the nation to articulate the need for, the status of, and specific recommendations for strengthening consumer and economic education programs. Some 1000 copies of the handbook were distributed, reaching seven members of each state education agency, every state legislative education committee, and numerous education professionals, including the Coalition for Consumer Education and Joint Council on Economic Education networks.

A forty-five member Michigan Task Force helped develop and twenty-one national reviewers suggested improvements for a handbook of commentary and recommendations for state and local policymakers on consumer and economic education. Certain basic assumptions were included in the Executive Summary and Foreword:

- Vast numbers of American youth and adults do not have the knowledge or skills they need to make informed decisions about consumer economic issues.
- Preparing students for responsible participation as producers, consumers and citizens is acknowledged in the Carnegie Foundation high school reform study as a critical component of a sound general education.
- A partnership approach to consumer and economic education is essential, in which educators cooperate among themselves and with interested members of the community.
- No program can prosper without administrative interest and support.

Task force members formulated ten specific recommendations for action by state education agencies, state legislatures and universities. They especially recommend that permanent state and local task forces be organized to set priorities, initiate activities, and monitor progress toward the achievement of significant, effective consumer and economic education programs.

DEFINITIONS

Clearcut definitions are not widely agreed upon in the fields of consumer and economic education. Some of the definitions in use are so broad as to appear interchangeable, while restricted perceptions of each field of study by practitioners in the other field sometimes impede cooperation in curriculum and program development. As of August 1982, forty-one states plus the District of Columbia have established laws, policies or regulations through their legislatures, boards of education or state education agencies which recommend or require some facet of consumer and/or economic education. Terminology used by the various states in their statutes and policy statements includes consumer education, economics, free-enterprise, consumer economics, personal finance, family law, and "thrift." The definitions used by the states and the content areas singled out for emphasis reflect the multiple meanings of the terms and the differences in focus desired.

Two major curriculum planning tools are available to educators interested in distinguishing between or in integrating certain aspects of consumer education and economic education. The documents and the definitions proved by the sponsoring organizations are:

Classification of Concepts in Consumer Education

Michigan Consumer Education Center, National Consumer Education Development Program Project, South-Western Publishing Company Monograph No. 137, 1982

Consumer education is the process of gaining the knowledge and skills needed in managing consumer resources and taking actions to influence the factors which affect consumer decisions.

Rosella Bannister and Charles Monsma - 1980

Master Curriculum Guide, Part I: A Framework for Teaching Economics: Basic Concepts

Joint Council on Economic Education, 1977

Economic education is the development of the knowledges and skills necessary for making reasoned judgments about various economic questions facing individuals and their society. More specifically, economic education develops the ability to make more objective, analytical, personal choices by using basic economic concepts to make decisions associated with the roles of consumers, producers and citizens and investors.

John Clow and Stowell Symmes - 1982

It should be noted that the term "consumer economics" also has a variety of definitions, ranging from a specialized area of the discipline of economics to the personal application of economics in daily living.

The combined reference to consumer and economic education in the handbook is a conscious decision intended to encompass and recommend for the kindergarten through adult education curriculum the full range of both consumer and economic education concepts, recognizing the value of each, without undue concern for unanimity on how either field is self-defined or defined by others. William Johnston writes from Oklahoma State University's Center for Consumer Services that "the divergence of views about what we are and do is our strength. We all, regardless of our affiliation and persuasion, have an important contribution . . . Let each of us go on doing what we do best."

IMPORTANCE OF CONSUMER AND ECONOMIC EDUCATION

Excerpts are highlighted from a number of national studies and surveys (cited in an appendix). In particular, the handbook singles out certain critical understandings which students must master if representative government is to prosper:

- *The universal fact of limited resources and the necessity for deciding at every level which goods or services to purchase and how to pay for them*
- *The relationship between political and economic systems and the dynamic nature of each*
- *The complex, interrelated impact of actions by the government, business and consumer sectors on each other*
- *The rights of individual citizens as consumers to a reasonable level of safety, information, choice and redress of grievance, and their responsibilities as providers of goods and services to meet reasonable consumer expectations*
- *The responsibility of individual citizens in every setting to promote and practice ethical behavior and a balanced concern for individual and societal rights.*

STATUS OF CONSUMER AND ECONOMIC EDUCATION

Three major studies were analyzed and compared. Additional data for seven states were obtained, and several graphic overviews of state policies were developed which reflect the findings of each source. The Michigan Consumer Education Center's conclusions as of August 1982 indicate:

- Forty-one states plus the District of Columbia have a specific policy regarding consumer and/or economic education
- Twenty-seven of the forty-one states have a legislative or board of education mandate requiring instruction in consumer and/or economic education
- Nine states have no official policy or mandate for consumer and/or economic education, usually in deference to a tradition of strong local autonomy, and not a reflection of lack of state education agency interest or absence of local programs.

The three major studies which were analyzed were:

Alexander, Robert J. State Consumer Education Policy Manual. Education Commission of the States, Denver, CO 80295. 1979.

Brennan, Dennis C. and Ronald A. Banaszak. A Study of State Mandates and Competencies for Economics Education. University of the Pacific Center for the Development of Economics Education, Stockton, CA 95211. 1982.

Yankelovich, Skelly and White, Inc. National Survey of Economic Education 1981: Grades Six through Twelve. Phillips Petroleum Company. 1981. Available from Playback Associates, 708 Third Ave., New York, NY 10017.

Indicators of increased activity in consumer and economic education programs include studies by: Bloom and Greyser; Richardson; Yankelovich, Skelly and White. New and established national networks for promoting such programs include the Coalition for Consumer Education and the Joint Council for Economic Education. The inadequacy of program evaluation is emphasized, both as a weakness in assessing program effectiveness, and as a drawback in promoting the value of expanded programs.

ISSUES IN PROGRAM DEVELOPMENT AND IMPLEMENTATION

Three broad categories of commentary are treated, with extensive references cited for further reading: Community Attitudes, Educational and Curriculum Matters, and Administrative Problems.

APPROPRIATE CONTENT AREAS

Two major curriculum planning documents are recommended and excerpted (already cited in the section on definitions). The number of topics which have consumer and economic implications is endless. There are few subjects in which references to consumer and economic issues cannot be emphasized if teachers are: sensitive to the opportunities; encouraged to incorporate appropriate attitudes, knowledge and skills in their courses; and have the training and resources which enable them to promote consumer economic

Mandates for Teaching Consumer and/or Economic Education -- 27 states require that students receive instruction in consumer and/or economic education

REQUIRED COURSE			REQUIRED INSTRUCTION	
Free Enterprise	Economics	Consumer Education Consumer Economics	K-12	High School
Arizona	Alabama	Idaho	California	Georgia
Louisiana	Oregon ←2 semesters→	Oregon	Connecticut	Illinois
	South Carolina		Delaware	Nevada
	Tennessee		Florida	North Carolina
	Texas		Kentucky	Rhode Island
			Maryland	Utah
			Mississippi	Virginia
			New York	Wisconsin
			Oklahoma	Wyoming
			South Dakota	

competence effectively.

Specific references are made to the linkage between consumer and economic education content and the fields of language arts, math, social studies, home economics and business education. Consumer and economic education is an integral part of all these disciplines, and inservice for teachers who need additional training can be designed and delivered if legislatures and state and local education agencies assert its significance, and cooperate with interested university, business, labor, community and consumer representatives to design and deliver quality programs. It is acknowledged that there is insufficient time in the curriculum to include all that students need to know. Curriculum designers must select from among the multitude of consumer and economic topics and concepts those of universal significance and as many as possible of local and immediate interest.

The recommendation to organize an advisory group of representatives from a variety of organizations must be clearly understood as providing community involvement without relinquishing the school's responsibility for determining the program's educational objectives. It is possible to create a responsible partnership among the different groups interested in consumer and economic education, with advisory group members making recommendations but not determining educational policy.

RECOMMENDATIONS FOR CONSUMER AND ECONOMIC EDUCATION

A broadly based task force has discussed the current status of consumer and economic education across the country, has reaffirmed its belief in the significance of consumer and economic education, and has considered the issues and problems involved in implementing and improving state and local programs. Recognizing that variations among state education agencies and their relationships to local district decision making will neccessitate some adaptation or revision, the Task Force on Consumer and Economic Education recommends that state education agencies, state legislatures, and universities:

1. Encourage local school boards and administrators to include consumer and economic education in the elementary, secondary and adult/community education curriculum

2. Promote lifelong consumer and economic education as a responsibility shared by family, school and community groups

3. Demonstrate commitment to the promotion and improvement of consumer and economic education programs by designating a state education agency staff member who will cooperate with grade level, subject area and interdisciplinary specialists, and other interested persons in developing a comprehensive statewide approach to consumer and economic education.

4. Encourage state and local agencies to allocate education funds to promote consumer and economic education programs and for research to determine and disseminate effective teaching and evaluation methods

5. Ensure the availability of trained, qualified teachers by encouraging the development and regular updating of preservice, inservice and continuing professional development programs for elementary, secondary and adult level teachers from the many disciplines which incorporate consumer and economic education attitudes, knowledge and skills

6. Encourage the formation of state and local advisory committees with representatives of business, labor, government, and consumer groups to support and reinforce consumer and economic education in the school and community

7. Assist in development and maintenance of up-to-date methods and materials information exchange systems for consumer and economic educators

8. Encourage the regular evaluation of consumer and economic education programs and materials, and assist local districts and community groups as requested in developing and refining existing assessment processes or instruments

9. Cooperate with non-traditional education programs and organizations to develop and deliver consumer and economic education to specific target audiences with particular consumer problems, such as handicapped persons, adult returning students, single heads of household, older citizens, and unemployed and underemployed workers

10. Establish permanent state and local task forces to set priorities, initiate action, and monitor progress toward the achievement of significant, effective consumer and economic education

No one expects a school district to accomplish an impossible ideal. But our individual students and our society deserve the best which we are capable of providing. It is the hope of the Task Force which developed the handbook that policymakers, educators, and concerned citizens at all levels will set specific priorities, will work toward achievable goals, and will sustain a permanent commitment to up-to-date, high quality consumer and economic education programs.

(Note: The handbook is one of 19 publications selected from 300 products of the U. S. Department of Education grants and contracts for presentation to commercial publishers as meriting wider dissemination under a contract with LINC Resources, Inc., Columbus, Ohio, for the Basic Skills Validation and Marketing Program.)

FINANCIAL PLANNING: STAFF DEVELOPMENT FOR INSERVICE TEACHER TRAINING

Rosella Bannister, Eastern Michigan University[1]
Iris Elfenbein, American Council of Life Insurance[2]

ABSTRACT

Business and education share common concerns about quality education and the effective utilization of limited resources. This session describes a cooperative effort between educators and the American Council of Life Insurance, a trade association representing America's life and health insurance companies, to produce a needed secondary staff development manual for financial planning education.

THE NEED

The need for teacher training in personal and family financial planning is urgent. Faced with a complex economic environment, including rising unemployment, economic depression, and an increasingly diverse array of financial products and services made possible by changes in government regulations and expanding technology, teachers need to know about recent economic developments affecting family financial stability and be able to help their students understand them.

Though several surveys indicate that state education departments expect secondary school students to receive some instruction in financial planning education and that teachers be prepared to teach the subject, there is a paucity of pre- and inservice courses available to teachers. The need for resources that provide a better understanding of personal and family financial planning (PFFP) both for those who teach and for the students themselves is apparent. The staff development workshop manual described below is intended to meet that need.

FINANCIAL PLANNING IN CONSUMER EDUCATION

Consumer Education is the process of gaining the knowledge and skills needed in managing consumer resources and taking actions to influence the factors which affect consumer decisions.

Financial Planning is a major conceptual strand in the Resource Management area of consumer education. Although financial planning has long been a central focus of consumer education, too often people procrastinate in designing and carrying out a plan, and make needless mistakes regarding their personal financial decisions.

Consumer education teaches that financial planning should be both short-term and long-term throughout the life cycle. Those concepts related to financial planning are defined in Monograph 137 Classification of Concepts in Consumer Education by Rosella Bannister and Charles Monsma, available without charge to educators from South-Western Publishing Company, 5101 Madison Road, Cincinnati, Ohio 45227. See Figure 1.

FINANCIAL PLANNING WORKSHOP MANUAL

The manual, Personal and Family Financial Planning: A Workshop for Secondary School Trainers and Teachers, was developed by a team of educators, each with expertise in consumer education, teacher training or curriculum development. The manual contains information and materials necessary to run an 18-hour workshop.

Part A of the Manual is a guide for workshop leaders. It describes personal and family financial planning, and suggests preparation and procedures for each workshop session. Part B provides content outlines and materials for the seven sessions that make up the workshop:

Session I -- Orientation to Financial Planning
Session II -- A Personal and Family Financial Plan
Session III -- Obtaining Financial Resources
Session IV -- Spending and Borrowing Financial Resources
Session V -- Saving and Investing Financial Resources
Session VI -- Protecting and Sharing Financial Resources
Session VII -- Infusing Financial Planning into the School Curriculum

Competencies and Basic Generalizations

Each session provides experience that leads to attainment of one or more of six financial planning competencies:

1. Analyze personal and family values, goals, and priorities and their relation to decisions in financial planning.
2. Provide an income base that draws upon a wide range of financial resources that can be anticipated to change throughout the life span.
3. Design a comprehensive personal or family financial plan, using that base, to reflect defined values, goals and priorities.
4. Implement the plan to meet short-term and long-term goals by applying principles of effective spending, borrowing, investing, saving and sharing.
5. Evaluate and modify the plan to meet changes in the household situation and in relation to outside social and economic conditions.

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[1] Director, Michigan Consumer Education Center

[2] Director, Teacher Education Program

6. Assess all aspects of the plan in terms of potential financial risk in order to provide for protection of resources and wealth.

Several basic generalizations underlie all of personal and family financial planning. These generalizations form the rationale and illustrate why financial planning has a place in the secondary school curriculum. The generalizations are:

1. Financial planning is a lifetime process learned in youth and used throughout life's stages to develop financial plans that reflect changed personal, household and societal conditions.
2. A financial plan helps individuals and families utilize a variety of financial resources to meet changing financial needs and responsibilities throughout the lifecycle.
3. Individuals and families can plan to maximize financial resources available at different stages of the lifecycle.
4. A financial plan periodically reviewed and modified helps individuals and families adapt to changing economic and social conditions.
5. Effective financial planning involves communication of values and wants, needs and responsibilities among family members.
6. Effective financial planning includes calling upon financial planning professionals in the community for information and advice on available products and services. These professionals include financial planners, insurance agents, bankers, investment counselors and estate planners.

Review and Field Test

The manuscript was reviewed by staff from the Association of Teacher Educators (ATE), as well as the Teacher Education Advisory Committee of the American Council of Life Insurance. The workshop was then field tested in cooperation with ATE in six states:

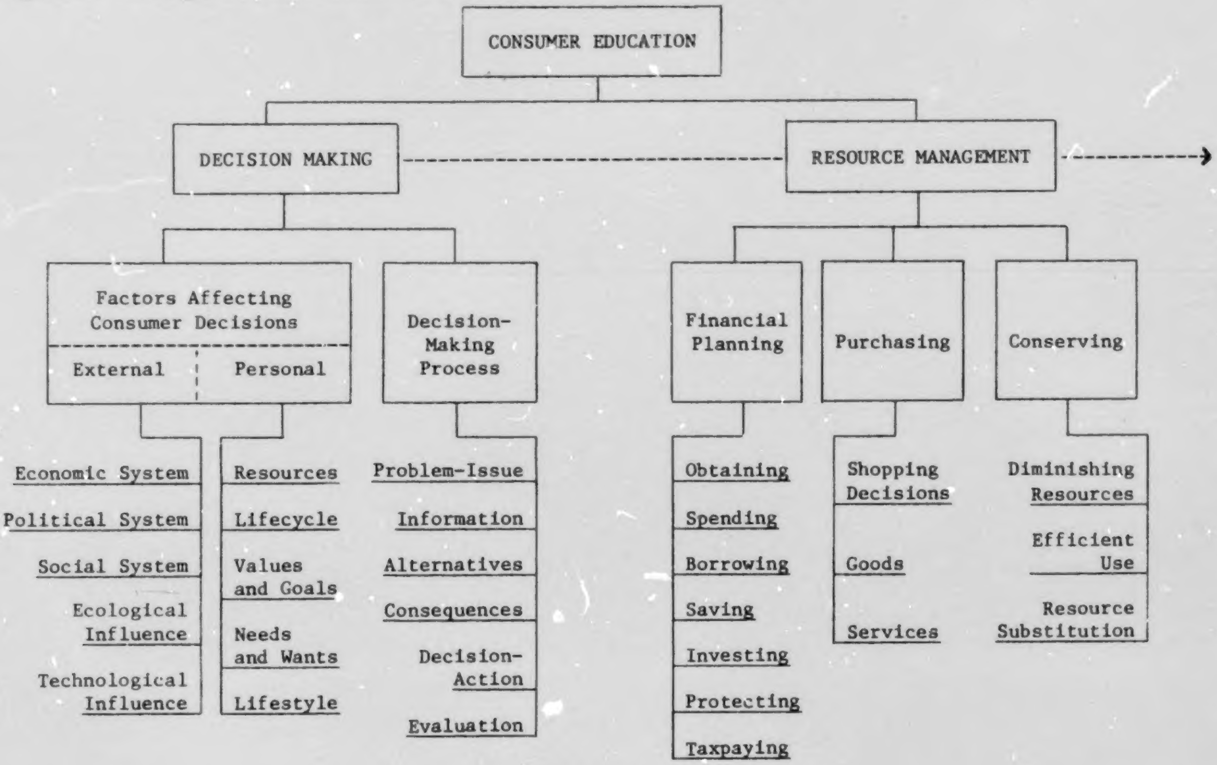
Indiana State University
Memphis State University
Sam Houston State University
Texarkana Teacher Center
University of Nebraska-Omaha
University of Wisconsin-River Falls

The field test results indicated that the materials were effective and useful for teaching financial planning. The revisions recommended were made and the materials were once again reviewed.

Availability

The development of this manual, Personal and Family Financial Planning: A Staff Development Workshop for Secondary School Trainers and Teachers, is an example of how business and education, working together, can provide needed educational resources. The manual, combined with a 15-minute introductory slide-tape, "Decisions-Decisions," provides a comprehensive financial planning training package which may be purchased for $8 from the Teacher Education Program, American Council of Life Insurance, 1850 K St., NW, Washington, DC 20006.

Figure 1. Abridged Classification of Concepts in Consumer Education


CONSUMER EDUCATION
DECISION MAKING
RESOURCE MANAGEMENT
Factors Affecting Consumer Decisions
External
Personal
Decision-Making Process
Financial Planning
Purchasing
Conserving
Economic System
Political System
Social System
Ecological Influence
Technological Influence
Resources
Lifecycle
Values and Goals
Needs and Wants
Lifestyle
Problem-Issue
Information
Alternatives
Consequences
Decision-Action
Evaluation
Obtaining
Spending
Borrowing
Saving
Investing
Protecting
Taxpaying
Shopping Decisions
Goods
Services
Diminishing Resources
Efficient Use
Resource Substitution

HOUSEHOLD PRODUCTION FUNCTIONS FOR FOOD PREPARATION

Kathryn Stafford, The Ohio State University
Margaret Mietus Sanik, The Ohio State University

ABSTRACT

Household production functions for food preparation were estimated using linear, quadratic and log linear functions. Output was measured by number of meals per day, servings per day and items per day. Inputs were homemakers' and spouses' hours per day, urban residential location, and range top, oven, broiler, microwave, charcoal grill and small appliance use. The nonlinear functions and number of items performed best.

Those of us who are interested in studying household decisions realize that one of the most neglected aspects of American life is the nature of everyday activities. Berk and Berk (1979) make the point that we have little empirical information on households' resource allocations or the mechanisms by which they occur. Of course, there is an enormous body of literature on households generated by a variety of academic disciplines, but the technological input/output relationships which form the underpinning of life within households have been virtually ignored. This paper will examine these technological input/output relations for meal preparation in households.

There are several reasons for wanting to know technological relationships for household activities. Berk and Berk (1979) used the concept of production functions, economists' term for input/output relationships, to examine the sequential nature of household activities. Production functions also allow us to assess the efficiency of household resource use. Once able to assess efficiency we can proceed to recommend ways to improve household resource allocations on something other than a normative basis.

Production functions characterize the means by which inputs such as labor, capital equipment, and raw ingredients are combined to produce outputs. We shall call household outputs commodities. Commodities may include made beds, cleaned baths, dressed children or prepared meals the focus of this paper. Each is the result of production processes that may interact or overlap. For the discussion of production functions which follows we borrow Berk and Berk's (1979) simple example of hamburger preparation.

The production of hamburgers, like any production process, requires inputs. Here the inputs are the labor of one or more cooks; capital equipment such as a knife, a cutting board, a broiler and a toaster; and the raw materials ground meat, buns, onions, and some source of energy such as electricity. Production of burgers or anything else necessarily occurs in a set of related steps. This fact implies several things about the ways in which the steps are related. First, there is a necessary sequence which must be followed. In their example buns must be sliced before burgers can be inserted. Second, the quantities of various inputs and products are related. One burger requires one bun, one onion slice, five minutes of labor and ten minutes broiling time for example. Third, these relations have serious consequences when you want to produce more than one unit of output. If we assume that burger production has what economists call constant returns to scale, two hamburgers would require twice as much of everything as one burger. In other words, the ratio of inputs to output is fixed. Although the assumption of constant returns to scale is common, increasing or decreasing returns are possible. In the hamburger example doubling the cook's labor tenfold might yield only eight burgers. Fourth, failure to provide some minimum amount of inputs brings production to a halt. With no cook there are no hamburgers.

Any particular household commodity can be produced a variety of ways. For any particular commodity the production function is defined as the set of efficient production techniques both for each particular configuration of inputs and across all possible configurations of inputs. Although economics provides us with the concepts we are using it does not provide us with empirical evidence on production functions in households. For that evidence we turn to home economics. The extensive literature on time use growing out of a series of U. S. Department of Agriculture studies focuses only on labor inputs to household productive activities. Two exceptions are two Cornell University Agricultural Experiment Station memoirs on homemaking work units (Warren, 1940; Walker, 1957). A work unit was defined as the average amount of work done in one hour by an average worker under average conditions. Warren (1940) and Walker (1957) studied both inputs and outputs of household activities in order to measure work units.

Warren (1940) found that number of servings was closely related to time spent on meal preparation, but number of items prepared was not. As the number of individual meals served weekly increased the time per individual meal served decreased (figure 1). As the number of articles baked increased, the time input increased at a decreasing rate (figure 2). As the lunch pails packed daily increased so did the time used (figure 3).

Walker (1954) reported meal preparation time and work units by meal type. Quantity of output was never published although it was measured and analyzed. Walker (1954) reported meal preparation time was unrelated to household size. Number of

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Assistant Professors, Home Management and Housing persons or meals served is not necessarily the same as household size and neither of these measures was related to meal preparation in published sources. Consequently, the more recent research on work units is not as helpful for the purpose of this paper as the first work.

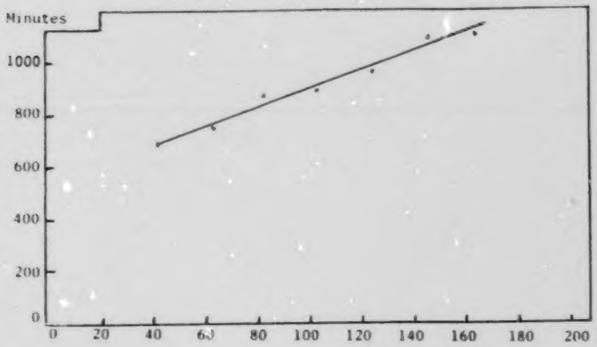

Figure 1. Number of Individual Meals Served and Minutes Used During the Week for Meal Preparation (Warren, 1940)

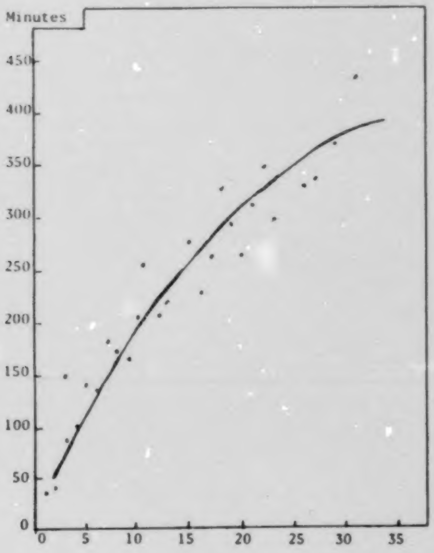

Figure 2. Number of Articles Baked and Minutes Used During the Week for Baking. (Warren, 1940)

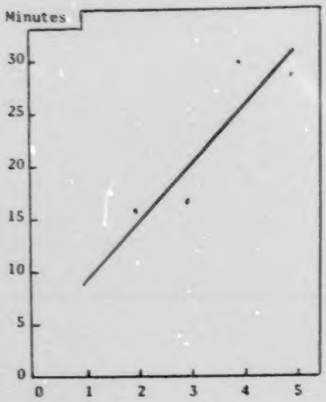

Figure 3. Number of Lunch Pails Packed and Minutes Used During the Week for Packing Lunch (Warren, 1940)

The research reported in this paper builds directly upon the work of Warren (1940) to estimate household production functions for meal preparation using three functional forms and three measures of output. Since Warren (1940) found both constant and increasing returns to scale in meal preparation activities a linear function, a quadratic function and a log-linear function are estimated. Number of meals per day, number of persons per day, and number of servings per day are used as measures of output quantity since Warren (1940) and Walker (1957) reported differing relationships between time inputs and number of persons.

METHOD

The model(s) estimated were:

linear $$Y_j = a + \sum_{i=1}^{8} b_i X_i \qquad (1)$$

quadratic
$$Y_j = a + b_1X_1 + c_1X_1^2 + b_2X_2 + c_2X_2^2 + \sum_{i=3}^{8} b_iX_i \qquad (2)$$

log-linear $$\ln Y_j = a + \ln X_1 + \ln X_2 + \sum_{i=3}^{8} b_iX_i \qquad (3)$$

for every Y_j, $j=1,2,3$

where

Y_1 = number of meals per day
Y_2 = number of items per day
Y_3 = number of servings per day
X_1 = homemaker's meal preparation hours per day
X_2 = spouse's meal preparation hours per day
X_3 = top of the range used
X_4 = oven used
X_5 = broiler used
X_6 = microwave oven used
X_7 = small appliance used
X_8 = urban residential location

The output measures selected differ in complexity. Number of meals is the simplest and captures the least information. Meals include snacks for one and dinner parties for eight. No quality variation is captured in this measure. Number of items captures more information about meal quality to the extent that quality is a function of the number of items served at any one time. Number of servings embodies the most information about meal preparation output quantity and quality. For any one meal, number of servings is the product of number of items and number of persons eating the meal.

Homemaker's and spouse's daily preparation hours were self recorded as the time was used. Only the labor of adults was used. To the extent that children help with meal preparation the model is misspecified. The direction of any bias this may introduce is unclear since it is not clear whether child and adult labor are complements or substitutes in meal preparation. Time contributions for children under six were not recorded for this data set. Any measure of children's time is, therefore, downwardly biased for this sample.

A set of dummy variables can be interpreted as measuring either capital inputs or technological innovation. Use of each piece of capital equipment entails use of a different technology for food preparation, not just a different means of organizing food preparation. The kitchen equipment variables, $X_3,...X_7$ reflect whether the equipment was actually used that day rather than simply present for use. The residential location variable was used to capture differences in housing facilities in urban and rural areas.

SAMPLE

The data were collected in 1977-78 as part of an interstate comparison of family time use in two-parent two-child households. In each state samples were stratified according to age of the younger child in both rural and urban areas. Equal cell sizes were obtained with days of the week and season of the year equally represented within each cell.

Forty-five percent of the households had employed homemakers while 97 percent of the spouses were employed. Median annual income of these families was between $15,000 and $19,999. Spouses tended to be better educated than homemakers. Fourteen percent of the spouses had a graduate or professional degree beyond the baccalaureate compared to five percent of the homemakers. Nineteen percent of the homemakers and 22 percent of the spouses had a baccalaureate degree, 30 and 49 percent respectively had some college, whereas 39 and 30 percent respectively had a high school diploma. Less than eight percent of the spouses and homemakers had less than 12 years of schooling. When both the younger and older children were considered: 19 percent of the children were under 2, 28 percent were between 2 and 5, 27 percent were between 6 and 11, and 26 percent were between 12 and 18 years of age.

Table 1. Means and Standard Deviations of Food Preparation Outputs and Inputs

Outputs	Mean	Standard Deviation
Number of meals per day	3.30	1.40
Number of items per day	12.73	5.57
Number of servings per day	38.05	19.76
Inputs		
Homemakers' daily food preparation hours	1.34	0.91
Spouses' daily food preparation hours	0.14	0.38
Top of range used	0.90	0.30
Oven used	0.52	0.50
Broiler used	0.06	0.25
Microwave oven used	0.07	0.26
Small appliance used	0.69	0.46
Urban residential location	0.50	0.50

RESULTS AND CONCLUSIONS

The functional relationship between food preparation inputs and outputs is discussed first. Next the performance of the output measures is assessed. Finally the results are compared with Warren's (1940).

The log-linear function performed best regardless of which output measure was used (Table 4). The linear function consistently performed worst (Table 2). For meals the adjusted R^2 increased from 19.9 percent for the linear function to 22.1 percent for the quadratic function (Table 3) to 26.4 percent for the log-linear function. The items for adjusted R^2 rose from 30.8 percent for the linear function to 33.2 percent for the quadratic to 38.8 percent for the log-linear function. For servings the figures were 26.5 percent, 28.5 percent and 40.9 percent. Based on the superior performance of the log-linear and quadratic functions we conclude that food preparation outputs increase at a decreasing rate as labor inputs increase. A functional specification which permits this is superior to a linear specification.

Table 2. Linear Production Functions for Household Food Production

	Number of Meals Per Day	Number of Servings Per Day	Number of Items Per Day
Homemakers' daily food preparation hours	0.348*	6.081*	1.664*
Spouses' daily food preparation hours	0.181*	2.481*	0.449*
Top of range used	1.028*	12.377*	4.334*
Oven used	0.231*	7.313*	1.548*
Broiler used	0.012	5.473*	1.038*
Microwave oven used	0.189*	3.006*	1.160*
Charcoal grill used	0.177	7.535*	1.212*
Small appliance used	0.579*	8.400*	2.963*
Urban residential location	0.062	-2.141*	-0.407*
Constant	1.316	9.032	3.709
Adjusted R^2	.199	.293	.308

(n=2100)
*Significant at the .05 level

Table 3. Quadratic Production Functions for Household Food Production

	Number of Meals Per Day	Number of Servings Per Day	Number of Items Per Day
Homemakers' daily food preparation hours	0.876*	13.912*	3.970*
Homemakers' daily food preparation hours squared	-0.123*	- 1.847*	-0.543*
Spouses' daily food preparation hours	0.528*	4.465*	1.240*
Spouses' daily food preparation hours squared	-0.080*	- 0.269	-0.140*
Top of range used	0.911*	10.622*	3.819*
Oven used	0.174*	6.549*	1.317*
Broiler used	0.022	5.034*	0.905*
Microwave oven used	0.150*	2.396*	0.982*
Charcoal grill used	0.050	6.197*	0.783*
Small appliance used	0.538*	7.790*	2.783*
Urban residential location	0.063	- 2.159*	-0.411*
Constant	1.072	5.700	2.709
Adjusted R^2	.221	.314	.332

(n=2100)
*Significant at the .05 level

Table 4. Log-Linear Production Functions for Household Food Production

	Number of Meals Per Day	Number of Servings Per Day	Number of Items Per Day
Natural logarithm of homemakers' daily food preparation hours	.168*	.230*	.195*
Natural logarithm of spouses' daily food preparation hours	- .083*	- .047*	- .067*
Top of range used	.380*	0.823*	.625*
Oven used	.795*	0.286*	.180*
Broiler used	.331	0.181*	.123*
Microwave oven used	.726*	0.145*	.143*
Charcoal grill used	.646*	0.274*	.145*
Small appliance used	.195*	0.383*	.326*
Urban residential location	.014	-0.058*	- .035*
Constant	1.520	2.250	1.486
Adjusted R^2	.264	.383	.388

(n=2100)
*Significant at the .05 level

We do not go so far as concluding the log-linear function is superior to the quadratic function. Intriligator (1978) has pointed out the statistical problems inherent in directly estimating a single production function.[1] We chose to accept these problems because other alternatives required an assumption of constant returns to scale which we were unwilling to make. Negative signs of the coefficients for spouses' time in the log-linear function may indicate the presence of some of these statistical problems. One possible explanation for these negative signs is that spouses (overwhelmingly husbands) primarily contribute labor when homemakers are inefficient or incapacitated and less total output is produced in these circumstances. However, if this were the explanation we would expect to see much larger coefficients for homemakers' time than for spouses' time in the quadratic function. Although the coefficients for homemakers' time are larger, they are all less than four times larger.

Otherwise the results were robust. No significant qualitative differences appeared as a result of using different output measures. That is, no variables were significant and opposite in sign from equation to equation within any one functional form. The only coefficients which were consistently insignificant were broiler use and urban residential location in all equations for meals. Charcoal grill was insignificant in the linear and quadratic equations for meals, as was the quadratic term for spouse's labor which was insignificant in the quadratic equation for servings. The coefficients for the set of capital variables had the expected signs, and with the

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[1] Estimation of a production function using direct measurements of actual inputs and outputs typically entails problems of simultaneity, multicollinearity, and heteroskedasticity. An alternative estimation procedure which would not require an assumption of constant returns to scale would be to estimate the system

$$\ln Y_j = a+b_1\ln X_1+b_2\ln X_2+\sum_{i=3}^{8}X_i+u_j$$
$$\ln Y_j = \ln b_1+\ln X_1+\ln\frac{W_1}{p}+V_j$$
$$\ln Y_j = -\ln b_2+\ln X_2+kb\frac{W^2}{p}+W_j$$

Where u_j is a technical disturbance term, V and W_j are economic disturbance terms, W_1 and W_2 are the wage rates of homemakers and spouses respectively, and p_j is the price of food.

"Estimating the complete system is generally superior to estimating only the first equation from both economic and econometric standpoints. From an economic standpoint estimating the complete system expresses the assumption that the data reflect both the behavior of the decision maker (the firm) and the technology, while the first equation reflects only the technology. From an econometric standpoint the estimator of only the first equation involves simultaneous-equations bias, so the estimators will be biased and inconsistent." (Intriligator, 1978, p. 269) previously noted exception, so did all the labor variables.

For each functional form the adjusted R^2 was highest for the items equation and lowest for the meals equation. The servings equation was a close second. These results indicate output measures which capture more information about quantity and quality perform better and may be worth any extra cost to collect the data. The consistency of signs and significance among output measures might lead one to think that they were simply scalar multiples of each other. If that were the case we would expect to see scalar differences among the coefficients for each functional form. This is not the case. Comparison of the coefficients for each functional form reinforces previous statements about differences in quality information contained in the output measures. Warren (1940) found that output increased at a constant (figures 1 and 3) or increasing rate (figure 2) as homemakers' time inputs increased. We found output increased at a decreasing rate as labor inputs increased. Whereas Warren disaggregated food preparation into meal preparation, baking, and lunch packing, we have aggregated meal preparation and lunch packing. Baking time is included in labor inputs but the output is included in the items and servings measures, and only if the output was offered to the family that day. These differences alone do not account for the difference in our results. Perhaps an S-shaped function would fit both Warren's data and ours better than any of the functions fitted to date.

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VOLUNTEER WORK PARTICIPATION IN DUAL-EARNER FAMILIES[1]

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ABSTRACT

Factors affecting the amount of time spent in volunteer work by husbands and wives in dual-earner families were studied. Multiple regression analysis identified the most important predictors for both husband's and wife's time as: time spent in paid work, spouse's volunteer time, children's volunteer time, and leisure time. Implications for a family theory of volunteer work participation and ways to increase volunteer work time for dual-earner families are discussed

In the 1980's, the economic situation has stimulated interest once again[4] in volunteerism as a way of providing human services. Voluntary agencies have been urged to assume the services no longer provided by public agencies due to budget cuts. Communities have responded by organizing food and clothing banks, shelters for the homeless, and a variety of human service programs. Participation in various cooperatives, especially for child care, has increased as consumers seek ways to minimize their cost of living. Although volunteerism does help to provide human services at a minimal cost to the community, it has a high cost in time spent by individuals.

It would seem that the current emphasis on volunteerism comes at a time when families have less available time for volunteer work than in the past. In recent years, more and more families have become dual-earner families. With both parents in the labor force, total time available for volunteer work is considerably less than in one-earner families. Thus, the focus of this study is the volunteer work participation of dual-earner families. The purpose is to examine the relationship between selected socioeconomic factors and the amount of time spent in volunteer work by husbands and wives in dual-earner families.

LITERATURE REVIEW

Since 1965, three national surveys have been conducted to investigate volunteer work and the characteristics of its workers. In the 1965 and 1974 studies conducted by the Bureau of the Census [8, 1], volunteer work was defined as "any unpaid work performed for or through an organization" [8, p. 21]. During 1965, 18.5 percent of all the civilian, noninstitutional population participated in volunteer work, whereas 24 percent volunteered during 1974. The third national study was conducted by the Gallup Organization and had a broader definition of volunteer work, "working in some way to help others for no monetary pay" [4, p. i]. As would be expected, volunteer work participation was higher with 52 percent of American adults volunteering [4, p. iv]. In all three studies, voluteer workers were more likely to be women than men and to be in the middle years of adulthood than younger or older. Volunteer work participation was positively related to family income. Additionally, the Gallup study found that people were more likely to volunteer if they were suburban or rural residents rather than urban residents.

Other studies have focused on women volunteers since they comprise a greater proportion of all volunteers and are more likely to volunteer than men. In a study of Army officers' wives, Finlayson [2] found women with school-age or older children were more likely to volunteer than those women with preschoolers, but Schram and Dunsing [6] did not find this to be a significant relationship. Both studies did find a positive relationship between volunteer work participation and social class. In a sample of highly-educated women, Mueller [5] found that the number of hours spent in volunteer work had a negative, though not significant, relationship with one's own wage rate. Time spent in paid work has been studied categorically as part-time work, full-time work, and not gainfully employed, rather than continuously. Finlayson [2] and the U.S. Department of Labor [8] found that part-time workers volunteered more than the other two groups. This relationship was not significant in the Schram and Dunsing study [6].

HYPOTHESES

It is hypothesized that the amount of time (minutes) the husband spends in volunteer work will be positively related to: (1) age of the younger child and (2) his age. It will be negatively related, though, to (1) minutes of paid work and (2) own wage rate. Time spent in volunteerism also will be greater for (1) husbands living in rural than urban areas, (2) husbands with a family income of $20,000 and over than a lower family income, and (3) husbands with the highest social class than a

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[1] This research was performed as a contributing project of the Northeast Regional Research Project NE-113, "An Interstate Urban/Rural Comparison of Families' Time Use," Cooperative Research, Science Education Administration, U.S. Department of Agriculture.

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[4] Throughout history, voluntary participation seems to be tied to social, economic, and political conditions [7].

lower social class. Further, it is hypothesized that these same relationships will hold true for the minutes the wife spends in volunteer work.

Three variables were available for testing which were not found in the literature. Since this was an exploratory study and the predicted relationships seem logical, the variables were included in the study. Minutes spent in leisure time is expected to be negatively related to minutes spent in volunteer work for both husbands and wives. Volunteer work can be considered an alternative time use for leisure activities. Minutes of spouse's volunteer time and children's volunteer time were both expected to have positive relationships with minutes spent in volunteer work for both husbands and wives. It is assumed that one's participation in an activity is influenced by the participation of immediate family members.

OPERATIONAL DEFINITION AND EXPLANATION OF VARIABLES

Definitions for the dependent and independent variables used in this study follow. Following each definition is an explanation of how the variable was measured.

Volunteer time is time spent in work or service done as an unpaid worker for relatives, friends, family business or farm, social, civic, or community organizations. It was measured as the mean minutes spent in unpaid work, including travel time, on two record days.

Time in paid work includes time at work for which pay was received and was measured as the mean minutes spent in paid work, including travel, for two record days.

Leisure time is time in social and recreational activities. It was measured as the mean minutes spent in leisure, including travel time, on two record days.

Age of younger child was measured in actual years with children less than one year of age assigned 1; range = 1-17.

Place of residence, rural/urban residence, was introduced in the regression equation as a dichotomous variable with the rural group as the omitted group.

Family income is comprised of three groups of total annual family income: up to $9,999; $10,000-$19,999; and $20,000 and over. Income was treated as a dummy variable with the last group as the omitted category.

Social class was constructed by combining measures of occupational status and educational achievement of the main earner (husband), following the procedure used by Hollingshead [3]. Seven occupational categories were used. Hollingshead's original educational categories were modified to more clearly parallel current educational levels which resulted in six, rather than seven, educational categories. From these two scales, a composite scale was constructed in which occupation was given a weight of seven and education a weight of four. Thus, the minimum score on this scale was 11; the maximum was 73. On the basis of these scores, five social classes were identified for use in this analysis:

Class	Range of Scores
1 (lowest)	11-17
2	18-31
3	32-47
4	48-63
5 (highest)	64-73

The highest class was used as the omitted category in the regression equation.

Wage rate is the wage per hour for the primary job.

Age is the actual number of years.

METHODOLOGY

Instrument

Data were collected using two instruments. The time record is a chart comprised of a grid along which each hour of the day is designated at top and bottom. Each hour is divided into ten-minute segments which can be further sub-divided into five-minute segments. Along the left and right columns, 18 activities are listed. These include paid work, unpaid work, school work, social and recreational activities, organization participation, eight household production activities, two categories for care of family members, two categories for personal care activities, and other--a category used when individuals cannot recall or do not wish to say what filled a given block of time. The second instrument is a questionnaire used to obtain information regarding socioeconomic characteristics of the family and its members.

Sample

The sample for this analysis comes from a larger study, "An Interstate Urban/Rural Comparison of Families' Time Use." The states participating in the larger study used the same criteria for sample selection. Previous research has established the relationship between family size and age of youngest child with use of time in various activities, particularly household production [9]. Consequently, the sample for the interstate study is limited to two-parent, two-child families. The sample is stratified by residence (one-half urban, one-half rural in all but two states) and by age of the younger child. Stratification by age of younger child is accomplished using the following categories: less than one year, one year, one to five years, six to 11 years, and 12 to 17 years of age.

States included in the present analysis are: California, Connecticut, Louisiana, New York, North Carolina, Oklahoma, Oregon, Texas, Virginia, and Wisconsin. Each state's data includes an original sample of 210 families equally divided between rural and urban residence, except Louisiana in which the sample consists of 105 urban families only and North Carolina in which the sample consists of 105 rural families only. The sample for the present analysis is comprised of families in which both husband and wife are in the labor force. Observations with missing responses to any of the variables used in this analysis are deleted, yielding a net sample of 405 families.

Data Collection

Data were obtained by personal interview conducted in the respondent's home. The person identified as the "homemaker" was the spokesperson for the family. At the first interview, information about the family's socioeconomic characteristics was obtained as well as a 24-hour recall of the activities on the previous day for all family members age six and older. Trained interviewers used color-coded symbols to complete the chart, simultaneously instructing the respondent in how to complete the chart so that a second record could be prepared for the following day. On the second day following the initial interview, the interviewer returned to confirm the completion of the recall chart and pick up the completed diary chart.

Data collection was handled in like manner for all the states. Interviews were systematically scheduled across all the days of the week so that an equal number of each day was ampled. Interviews were scheduled throughout a one-year period in each state, with a quota of interviews to be completed in a given period of time. For the total sample, data collection occurred between 1976 and 1978, but was restricted to one calendar year for any given state.

Method of Analysis

Multiple regression was used to test the hypotheses. Two separate regression equations were obtained, one for the husband's volunteer time and one for the wife's volunteer time. Beta coefficients were examined to identify the best predictors of each dependent variable.

FINDINGS

Socioeconomic characteristics of the sample are in Table 1. Almost 55 percent of the families had incomes of $20,000 or above. Fifty-six percent of the husbands had some education beyond high school and, fifty-three percent of their wives had this amount of education. Husbands were more likely to

TABLE 1. Socioeconomic Characteristics of the Sample.

	Husband (n = 405)	Wife (n = 405)
Occupation	%	%
Unskilled laborer	1.5	1.0
Operative, semi-skilled worker	13.0	20.3
Skilled manual worker	27.7	7.4
Clerical, sales worker	17.9	39.9
Administrative	6.2	17.6
Managerial, small business owner	18.8	4.3
Executive, proprietor, professional	15.0	9.3
Level of education		
8 years or less	2.5	1.0
9-11 years	7.7	5.4
High school graduate	33.6	40.3
Some college; technical training	23.5	28.6
College graduate	19.3	16.6
Advanced degree	13.5	8.1
Family Income		
$1,000-$9,999	3.7	3.7
$10,000-$19,999	42.0	42.0
$20,000 and above	54.3	54.3
Social class		
1 (lowest)	.7	--
2	17.8	--
3	36.0	--
4	28.1	--
5 (highest)	17.3	--

be employed in professional, technical, or managerial occupations (40 percent) while the same percent of their wives were clerical or sales workers. The majority of the husbands had social class scores of three or four on a scale of five.

Results of the two regression equations indicate slightly different explanations for volunteer work participation of husbands and wives (Table 2). Although both were significant at the .001 level, the adjusted R^2 was higher in the equation for wives than for husbands; it was .13 and .09, respectively. The same independent variables were significant in each equation but with different levels of significance and different *beta* weights.

For husbands, the most important predictor was minutes of paid work. This relationship was negative and significant at the .001 level. Other variables significant at the .001 level were minutes of spouse's volunteer work and minutes of children's volunteer work. Both relationships were positive. Minutes of leisure time was negatively related to minutes of volunteer work and significant at the .05 level. Thus, minutes spent in volunteer work by husbands increased as (1) minutes in paid work decreased, (2) minutes of spouse's volunteer work increased, (3) minutes of children's volunteer work increased, and (4) minutes of leisure time decreased.

The most important predictor of volunteer work time for wives was minutes of children's volunteer work. Significant at the .001 level, this relationship was positive. The next most important predictors were minutes of leisure time and minutes of spouse's volunteer work. The relationships were negative and positive, respectively. Both were significant at the .001 level. Minutes of volunteer work was negatively related to minutes of paid work and significant at the .05 level. For wives, then, minutes in volunteer work increased as: (1) minutes of children's volunteer work increased, (2) minutes of leisure time decreased, (3) minutes of spouse's volunteer work increased, and (4) minutes of paid work decreased.

CONCLUSIONS AND IMPLICATIONS

Although the variables in this study did not explain a great deal of variance in the two dependent variables, some new and important relationships were ascertained. All three relationships posited on a logical basis were confirmed, as well as one of the relationships found in the literature.

The importance of both spouse's and children's volunteer work participation has implications for development of a family theory of volunteer work participation. Volunteer work may be a way that families spend time together. The greater importance of the children's volunteer work participation in determining the wife's volunteer time, than the husband's, is probably related to her traditional maternal role. This relationship may be somewhat different in families that have more of a shared parental relationship with their children. Another implication is for the investigation of socialization for volunteer work. It seems likely that a pattern of volunteering as a child and having parental role models for volunteering would tend to influence volunteering in adulthood.

The relationship for paid work is not unexpected. The greater importance in determining husband's volunteer work time is undoubtedly a function of his traditional role as primary breadwinner. Since husbands generally tend to work more hours in paid work than wives, they would have fewer hours available for volunteer work. This relationship, too, would probably differ in families with shared parental and work responsibilities.

Finally, the relationship between volunteer work time and leisure time confirms the fact that there is a trade-off between volunteer work and leisure time. This relationship deserves further investigation since volunteer work might be considered a form of leisure for some, but not for others who might consider it an obligatory activity. Trade-offs between volunteer work participation and housework time also should be investigated. It is possible that some volunteer work is viewed as child care, for example.

Even though they have a greater time constraint than single-earner families, dual-earner families might be able to increase their time spent in volunteer work. One way might be for them to perceive volunteer work as part of leisure or housework, rather than as added time expenditures. Especially important would be for them to see the possibilities for increased family interaction which can result when the family volunteers together. Finally, the parents can use volunteer work to teach their children the values of working with and helping others.

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TABLE 2. Results of Regression on Minutes of Volunteer Work by Husbands and Wives (n = 405).

	Husband		Wife	
Independent variables	Beta	b (Std. error)	Beta	b (Std. error)
Minutes of paid work	-.23***	-.0511 (.01)	-.11*	-.0241 (.01)
Minutes of leisure time	-.17*	-.0527 (.02)	-.17***	-.0470 (.01)
Minutes of spouse's volunteer work	.17***	.2148 (.06)	.16***	.1277 (.04)
Minutes of children's volunteer work	.15***	.1271 (.04)	.26***	.1755 (.03)
Age of younger child	-.01	-.1267 (.63)	.09	.6427 (.53)
Place of residence[a]	-.06	-5.1667 (4.47)	-.01	-.5315 (3.40)
Family income[a]				
Under $1,000-$9,999	-.04	-9.1150 (12.29)	.01	2.5226 (9.35)
$10,000-$19,000	-.04	-3.8956 (5.06)	.06	4.6686 (3.74)
Social class [a]				
1	-.02	-8.5015 (26.68)	-.01	-2.4665 (20.23)
2	.04	4.8410 (7.81)	-.05	-5.0145 (5.84)
3	.00	.0160 (6.74)	.04	2.8213 (5.07)
4	.03	3.5414 (6.71)	.07	5.3990 (5.07)
Wage rate	-.06	.0072 (.01)	.00	.0001 (.00)
Age	-.06	-.3849 (.42)	-.06	-.3240 (.40)
Adjusted R^2	.09***		.13***	
Mean value of dependent variable	16.08		13.56	

[a] Coded as dummy variables

*$p \leq .05$

***$p \leq .001$

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ESTIMATING HOUSEHOLD PRODUCTION FUNCTIONS: A CASE STUDY[1]

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ABSTRACT

The NE-113 Time Use sample is used in a methodological study which attempts to estimate directly the household laundry production function. Number of loads of laundry completed per day is regressed on special estimates of the times spent doing laundry by family members. The special estimates of time use are designed to purge any correlation with the random disturbance term. Both linear and Cobb-Douglas laundry production functions are estimated. As expected, the marginal product of the wife's time in laundry is much lower than that for any other family member. Given diminishing marginal productivity and the fact that she spends much the most time in the activity, the results are reasonable.

Household production is a curious phenomenon. Everyone does it and everyone consumes its fruits, but only infrequently are they ever observed with sufficient clarity to measure them with any degree of accuracy. The reason is simple. Since households consume the commodities they produce, the commodities never pass through markets. For them to be traded in markets there must be implicit agreement among buyers and sellers as to the units and prices in which the commodities are traded. Lacking both units and prices for home-produced commodities, the analyst has little or no data to analyze. One conseqence of this situation is that most household production does not appear in the national economic accounts, there not being sufficient agreement as to the accuracy of measures of either the quantity or the value of home production. Another consequence is that consumer economists have difficulty in discussing and analyzing the efficiency of household production, there not being any hard evidence as to the amount produced with given amounts of inputs.

There have been several alternative tactics employed to circumvent these difficulties. Some of those interested in valuing household production have taken a "value-added" approach and attempted to value the time spent in household production (e.g., Gauger, Hawrylyshyn, and Zick and Bryant). Given data on what has been produced, others have valued it at market replacement prices (e.g., Sanik and Stafford, and Goldschmidt-Clermont). The only attempt at empirically deriving the household production function has been Gronau's. He used an indirect approach by which the household production function is inferred from the wife's home-time supply function. To the present, no one has attempted to estimate a household production function directly.

This paper describes a direct attempt to estimate a particular household production, that of laundry production. The purpose is methodological and has neither a policy nor a management focus. It is an extension of the M.S. thesis by Henze. We view the paper as a modest step toward the day when we will have the methods and the data with which we can measure the various dimensions of household output and understand their determinants.

Section I lays out the theoretical household production function we attempt to estimate. Section II follows with a description of the data with which we make the attempt. Section III lays out the econometric model linking the theory to the data. Section IV presents, interprets, and evaluates the estimates while Section V draws overall conclusions.

SECTION I

The theoretical notion of a household production function is quite simple. It is a mathematical function relating the output of the production process per unit of time to the quantities of inputs used in the process. The form of the mathematical function represents the technology; i.e., the way in which the inputs are combined to produce the output. It is the recipe, so to speak.

In the present case we have data on the amounts of clean clothes produced per day along with some but not all of the inputs used to produce them for a sample of households. Hence, let C_h represent the quantity of clean clothes household h produces per day; T_{hi} $(i = 1,\ldots,4)$ represent the time person i in household h spends laundering per day; X_h represent the quantities of detergent, water, energy, etc. used per day in laundering; W_h represent the services of washers used per day; D_h represent the services of dryers used per day in laundering in household h. Then, the laundry household production function can be represented as

$$C_h = c(T_{h1}, T_{h2}, T_{h3}, T_{h4}, X_h, W_h, D_h). \qquad (1)$$

This is the theoretical function that is to be estimated.

Several things are to be noted about this function. The output, C_h, represents not only the quantity of clean clothes but also the quality. Suppose that N_h represents the quantity of clothes laundered while Q_h represents the quality or the cleanliness achieved by the process, then

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[1] The paper could not have been written without the expert programming assistance of Bill Putsis and Robert Weagley. We are indebted to them.

[2] Professor, Associate Professor, Department of Consumer Economics and Housing.

[3] Research Assistant.

$$C_h = N_h Q_h. \tag{2}$$

Next, X_h represents a vector of inputs that might be called the operating inputs. W_h, the services used per day of the washer, is measured as a flow, and does *not* refer to the mere presence of the machine. The same is true of D_h. Finally, the mathematical form of the function is not specified. In fact, we know nothing about the mathematical form of the function *á priori*.

SECTION II

The data used in this study comes from the NE-113 Time Use sample collected from 2,100 two-parent, two-child families in 11 states in 1977-1978 (see Lovingood for details). Each family was asked to record the time use of each member of the family over the age of six for each of two days (the day before the interview and the day after) along with a wealth of other information about the family. There are, therefore, 4,200 sample points, two for each family. Included in the data collected are data on number of loads of laundry done per day, time spent by each of the family members over the age of six in the laundry activity (sorting, washing, drying, folding, ironing), whether the family owned an automatic or a nonautomatic washer, and whether it owned a dryer. The data on these variables form the basic information about the inputs and outputs that we possess.

Clearly, these variables reflect only imperfectly the quantities of the actual inputs used in the laundry activity and the actual quantity of outputs achieved by each family on each of the two days. While the number of loads of clothes laundered may capture the quantity of clothes laundered, what about the quality? To the extent that families control the quality by reducing the number of clothes washed and dried per load, the number of loads also captures the quality dimension. The absence of any data on the types and amounts of water, detergent, bleach, fabric softener, and the like is a defect that cannot be overcome. The results must be evaluated in the light of their absence. Ownership of washers and dryers was almost universal. Consequently, we worked with a subsample of owners of both automatic washers and dryers.

SECTION III

The econometric specification of the model is much more complex than the theoretical model. This is because the theory refers to a technological phenomenon whereas the data are the result of family behavior. The two are not the same yet the former must be inferred from the latter. To do so requires that both the stochastic and behavioral elements of the data be taken into account as well as the data inadequacies.

We deal with the data inadequacies first. The lack of data on service flows from the laundry equipment possessed by the household and the universality of ownership is dealt with by assuming that the service flow from a washer or a dryer is constant given possession and by restricting the analysis to only those families who possess both an automatic washer and a dryer. In addition, we deleted those families who did no laundry on any day. This left us with a sample of 1,754 observations, two for each of 877 families. Not having any measure of C_h, we make do with the number of loads of laundry done per day, N_h. Then, we can reformulate the laundry production function as

$$N_h = n(T_{h1}, T_{h2}, T_{h3}, T_{h4}, X_h). \tag{3}$$

N_h can be viewed as a measure of C_h that contains measurement error. This measurement error is one justification for attaching a random disturbance term to equation (3). Note, too, that equation (3) contains the amounts of operating inputs, X_h, for which no data exist in our data set. On the assumption that the use of X_h varies randomly among households, X_h can be included in the random error term.

Households cannot all be expected to behave efficiently. If they are satisfaction maximizers, then to launder efficiently implies that two conditions are met. The first is that the household launders such that any given level of laundry output is produced at lowest cost. This implies that the ratio of the marginal products, MP, of any two inputs in the laundry activity must be equal to the ratio of their opportunity costs; i.e.,

$$(MP_y/MP_z) = P_y/P_z, \tag{4}$$

where Y and Z are any two inputs into laundry production, and P_y and P_z denote their respective opportunity costs to the household. The second condition is that the amounts not only of laundry, but of all other things the household consumes as well, be the amounts that maximize the household's satisfaction, given the household's resources of time, money, etc. This occurs when the ratio of the marginal utilities of laundry, MU_c, and other things, MU_o, is equal to the ratio of their opportunity costs, P_c and P_o, respectively, i.e.,

$$(MU_c/MU_o) = P_c/P_o. \tag{5}$$

Because households make management errors, we assume that these two conditions are met only approximately. To take account of such mistakes a random disturbance term must be included in equation (3). It also includes X_h as well as the measurement error in N_h as assumed above. This random error term can be added to equation (3) to form

$$N_h = n(T_{h1}, T_{h2}, T_{h3}, T_{h4}) + e_h \tag{6}$$

where e_h is the random error term.

Equation (6) would be the correct econometric specification if it were the case that the arguments of n(.) were independent of the error term. Unfortunately, the process of satisfaction maximization implies that the optimum input levels are not independent of the optimum level of N. This is so because the household decides how much N_h to produce and consume to maximize satisfaction. Given this optimum level of N_h, the optimum levels of the T_{hi} are chosen. Thus, the T_{hi} are determined conditional on N_h. In consequence, the T_{hi} are correlated with e_h. Equation (6), therefore, consists entirely of endogenous variables plus a random error term. An ordinary least squares estimate of equation (6) would yield biased estimates of the technical parameters underlying the laundry activity (Hoch), and consequently reveal nothing of the underlying technology.

A solution to this problem is to use measures of the T_{hi} in the estimation of equation (6) which are purged of the correlation with e_h. To obtain such measures, note that the household's demand functions for the T_{hi} can be written as

$$T_{hi} = t_i(w_1, w_2, w_3, w_4, I, FC, S, DD) + u_h \qquad (7)$$

where:

wi = opportunity cost of time of the i^{th} person ($i = 1,\ldots 4$);

I = family income;

FC = vector of family characteristics which affect either the households' preferences for or productivity in laundry;

S = vector of day of week and season of year variables to adjust to the weekly and seasonal habits of families;

DD = a dummy variable to distinguish the recall from the record day.

Estimates of equation (7) can be made and predicted levels of T_{hi}, T^*_{hi}, can be used to replace the T_{hi} in equation (6). Since the T^*_{hi} are functions only of opportunity costs, income, family characteristics, and weekly and seasonal variables, all of which are exogenous and do not involve e_h, they are uncorrelated with e_h. The econometric specification of the theoretical model is, therefore,

$$N_h = n(T^*_{h1}, T^*_{h2}, T^*_{h3}, T^*_{h4}) + e_h \qquad (8)$$

Two final points need to be made about the model. First, equation (7) was estimated by Tobit. This was done because the dependent variables are truncated at zero, making ordinary least squares inappropriate. Second, both linear and log-log functional forms were tried in the case of equation (8). The log-log form is the well-known Cobb-Douglas function much used in production function analyses.

SECTION IV

Table 1 contains the means and standard deviations of the number of loads of laundry done per day as well as the observed and estimated values of the times spent by each family member doing laundry. Each family did about 2.4 loads of laundry per day. While the wife spent about 41 minutes per day, on average, doing laundry, the rest of the family members spent only about one minute per day, on average, doing laundry. What is interesting is that neither the husband nor the older child spent more time doing laundry than the younger child. The estimated mean values of the times spent doing laundry by each family member from the tobit estimates are very close to the observed means. Naturally, the standard errors of these estimates are much smaller than for the observed values.

The ordinary least squares estimate of the linear form of the laundry production function is

$$N = 1.3931 + .0204T^*_w + .0707T^*_f + .0468T^*_t + .0132T^*_y,\ R^2 = .0118 \quad F = 6.19 \qquad (9)$$

where w = wife, f = husband, t = older child, and y = younger child. The t-ratios for the variables in the equation are: 5.814, 3.901, 2.392, 2.348, and .737, respectively. The equation as a whole and all of the variables except T^*_y, therefore, are significantly different from zero at the one percent level or higher. Despite the very high significance levels, the equation accounts for a disappointingly small proportion of the variance in N.

Table 1. Means and standard deviations of laundry loads and times spent by family members in laundry activities per day.

	Mean	Standard Error
Number of laundry loads per day	2.4	1.4
Laundry time, min. per day†		
Wife		
observed, T_w	40.9	44.7
estimated, T^*_w	42.9	6.9
Husband		
observed, T_h	1.1	7.0
estimated, T^*_h	1.1	1.2
Older child		
observed, T_o	1.0	7.7
estimated, T^*_o	1.2	1.8
Younger child		
observed, T_y	1.0	8.7
estimated, T^*_y	1.3	2.1

†Estimated laundry times based on $T_{hi} = f_i$ (wife's shadow wage rate, husband's marginal wage rate, wife's education, wife's age, ages of children, sexes of children, income, no. of rooms in dwelling, urban/rural, season of year, day of week, interview day). The estimates of the laundry time use supply functions available from W. Keith Bryant upon request.

The ordinary least squares estimate of the log-log form of the laundry production function is

$$N = -.4984 + .3391 \ln T^*_w + .0484 \ln T^*_f + .0419 \ln T^*_t + .0032 \ln T^*_y;\ R^2 = .0018 \quad F = 6.208. \tag{10}$$

The t-ratios are, respectively, 1.635, 4.147, 2.831, 2.776, and .231. The equation as a whole and all the variables in it except the constant term and T^*_y are significantly different from zero at the one percent level or higher. Again, the proportion of the variance accounted for by the equation is disappointingly small.

The interpretation of these results is straightforward. The coefficients on the variables in the linear equation are estimates of the marginal products of each family member's time in laundry production. Since in this equation, the marginal products do not change as the time spent in laundry changes (in contrast with production theory), these estimates must be interpreted as estimates at the sample means. Thus, for instance, if the wife were to increase the amount of time she spends in laundry by one hour and other family members' times remained constant, she could expect to increase the number of completed loads of laundry per day by 1.224 (i.e., .0204 loads per minute times 60 minutes). Likewise, if the husband were to increase the time he spends doing laundry by one hour, he could expect to increase the loads of laundry completed per day by 4.242 (.0707 x 60).

The coefficients of the variables in the log-log equation represent output-input elasticities; i.e., the percentage increases in loads of laundry done given one percentage increases in the times spent by the family members, ceteris paribus. For instance, if the wife's time in laundry activities were to increase by one percent, the number of loads of completed laundry would increase by .34 percent. Since in the log-log version of the production function the output-input elasticities do not change as times spent change, the elasticities are to be interpreted as estimates at the point of sample means.

There are several implications of these results which can be investigated. While they are interesting in their own right, they can also be used to check the reasonableness of the results. We investigate five.

Since estimates of the opportunity costs of time for both the wife and the husband are available, we can use equation (4) to check to see if the sample families are, on average, technically efficient in laundry activities. The sample average estimate of the opportunity cost of the wife's time doing laundry is \$2.67 per hour or \$.04 per minute. This is the estimate of the reservation wage rate of the wife. The reservation wage rate is her wage rate, if she is employed, and the lowest wage rate which would draw her into the labor market, if she is not (see Zick and Bryant for details and estimates based on this data set). The husband's actual wage rate is his opportunity cost of time since in this sample all are employed. The average wage rate for husbands in the sample is \$8.13 per hour or \$.14 per minute.

The ratio of the marginal product of the wife to that of the husband from the linear equation is .29. In the log-log version the MP of any family member's time is b_i (N/T_i) where b_i is the output-input elasticity for member i and N and T_i are taken at their means. Thus, from the log-log version $MP_w = .0199$, $MP_f = .1056$, and the ratio of the two is .19. The ratio of the two opportunity costs of time is 2.67/8.13 = .33. The ratios of MP's from both linear and log-log versions were tested for equality with the ratio of the two opportunity costs. This is a test for the truth of equation (4) at the point of sample means. Both tests were confirmed at above the one percent level of confidence. We conclude, therefore, that sample families, on average, allocate parental time in a technically efficient manner; i.e., in a least cost manner.

The orders of magnitude of the family members' marginal products from both versions are roughly consistent with the times each family member spends in the laundry activity on average (see Table 1). Given the principle of diminishing marginal productivity, the marginal products of each family member can be expected to be negatively correlated with the times each spend in laundry production. Since the wife spends much the most time doing laundry, her marginal product can be expected to be lowest. In fact, only the younger child's is lower. This is to be expected, not on the grounds of the time it spends in the activity, but because the younger child will be the least proficient, its average age in the sample being only five years.

Equation (4) can also be used to derive implicit estimates of the opportunity cost of time of each child. Given estimates of the MP's of a parent's and child's times and an estimate of a parent's opportunity cost of time, then the implicit opportunity cost of the child's time can be calculated from equation (4). It is calculated only for the older child given the lack of significance of the estimates for the younger child. The estimates are \$6.13 and \$13.14 per hour based on the wife's opportunity cost of time and the linear and log-log estimates of the MP's respectively. The estimates are \$5.38 and \$7.17 per hour based on the husband's opportunity cost and the linear and log-log estimates respectively. Given the value of children's time in school and the natural inclination of parents to do things for them, none of these estimates seem out of line.

If the family maximizes satisfaction with respect to the laundry activity, the ratio of the opportunity cost of any input, p_z, to its marginal product, MP_z, will be equal to the implicit value the family places on the output of the activity, p_n; i.e.,

$$p_z/MP_z = MU_c/MU_m = p_n \tag{11}$$

where MU_c is the marginal utility of clean clothes and MU_m is the marginal utility of money. The estimates of the sample average implicit dollar value of clean clothes per load are $1.74 per load based on p_w/MP_w and $1.92 per load based on p_f/MP_f from the linear results. The analagous log-log results are $2.25 and $1.28 per load respectively. Laundromats charge approximately $.75-$1.00 to wash and dry a load. This does not include folding or any ironing nor does it include transportation to and from the laundromat and the time involved. These estimates of the implicit value of a load of completed clean clothes, then, appear within a reasonable range.

Finally, using the log-log version one can test whether economies of scale are present in laundry production. If economies of scale do exist, then the sum of the output-input elasticities over all family members will exceed one. If diseconomies of scale exist, the sum will be less than one. And, if constant returns to scale exists, the sum will equal one. The sum is .4326, a number significantly lower than one at the one percent level of confidence. There is strong evidence for diseconomies of scale, therefore. This is not surprising since the analysis has held laundry equipment constant.

SECTION V

The paper has attempted the estimation of a household laundry production function in order to develop appropriate methods for estimating household production functions. The method entails estimating the derived demand functions for the inputs into the productive activity under study and then to regress the output of the activity on the values of the inputs as estimated by the derived input demand functions. This technique purges the input variables of any correlation they may have with the error term in the household production function.

The results appear to be somewhat more reasonable for the linear version of the laundry production function than for the log-log (Cobb-Douglas) version. Neither version accounted for more than a very minor proportion of the total variance in number of loads of laundry done per day. The reason for this may be found in Table 1. Note that the estimated time uses, T^*_{hi}, have much smaller variances than the actual time uses, T_{hi}. The variance removed from the time use variables in order to make them exogenous may well account for some of the variance in N. The cost of estimates of the production parameters with good statistical properties may be much reduced R^2's.

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TRADITIONAL AND HOUSEHOLD PRODUCTION MODELS OF CONSUMER CHOICE: SIMILARITIES AND DIFFERENCES

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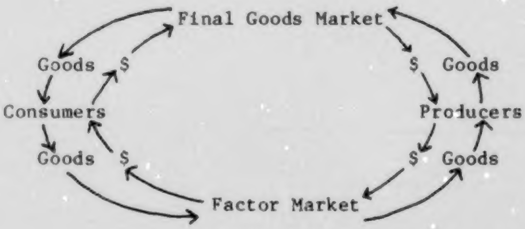
Abstract

The traditional static model of consumer choice is compared to the static household production function model. Similarities and differences are noted. The household production function model is consistent with the dual role of consumers. The value of the last dollar spent is shown to be the decision making rule, although the composition between models differs. One data set available for testing the household production function model is the 1975-76 Time Use Diary. Three studies using it investigated joint production, volunteer activity, and home repair.

The circular flow diagram, found in most principles of economics texts, is used to display the relationships among the various segments of an economic system. In its simplest form there are two groups, producers and consumers, and two markets, final goods and factor. This is shown as Figure 1. The basic economic principle represented by this diagram is that consumers as well as producers are buyers and sellers.

Figure 1



Traditional economic theory focused on consumers as buyers. Through maximizing utility subject to a budget constraint, a system of demand equations and associated theoretical constraints are derived as the basis for the study of consumer demand. This approach neglected completely the resource management aspects relating consumers to the factor market. Beginning with the work of Becker [1], Lancaster[4], and Muth [6], economic theory has focused on the entire economic activity of consumers. This is the household production approach in which consumers behave in a manner analogous to a firm. Market goods are combined with household resources, principally labor, to produce desired goods and services usually referred to as commodities.

While many of the advantages of the new approach are well known, it is felt that one particular theoretical formulation of the problem is well suited for straightforward interpretation. Unfortunately, the published literature does not take advantage of this methodology. The present paper is an effort to address this shortcoming. A clear distinction is drawn between the traditional and household production models. First order conditions for utility maximization for the two models are compared and interpreted. Conclusions are drawn regarding the advantages of the newer approach. The paper ends with an overview of a data source which has been used to test household production models.

TRADITIONAL VERSUS TIME ALLOCATION MODELS

Traditional economic theory assumes that a consumer derives utility directly from market goods acquired each budget period. The only constraint is that expenditures equal income in each period. There is no possibility for borrowing or saving within this static model. The left-hand side of Table 1 presents the basic equations of the classical utility maximization model. Equation 1 indicates that utility, U, is a function of market goods, X_i, of which there are n. Acquiring market goods is constrained by the ability to purchase them in the final goods market. This is the budget constraint shown as equation 2, where Y represents income, and P_i is the market price per unit of good X_i. Notice that this traditional model only relates a consumer to the final goods market in Figure 1. No consideration is given to the interaction with the factor market as income is determined outside the model.

Maximizing equation 1 subject to equation 2 is a straightforward calculus problem. Its solution in a two good world ($n = 2$) is the graphical equivalent of locating the point of tangency between the budget line and the set of indifference curves. Equation 3, the solution to the problem, identifies the key decision making criteria.[1] The marginal utility (MU) of a good divided by its price is referred to as the value of the last dollar spent. Each numerator represents the change in utility a consumer receives from an incremental unit of a good. Each denominator is the market price per unit of

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[1] For a complete discussion of these conditions, see Deaton and Muellbauer [2].

Table 1

Traditional Model

Utility

(1) $U = u(X_1, \ldots, X_n)$

Constraint

Income

(2) $Y = \sum_{i=1}^{n} P_i X_i$

First Order Conditions

(3) $\dfrac{MU_{X_i}}{P_{X_i}} = \dfrac{MU_{X_j}}{P_{X_j}}$

Household Production

Utility

(1a) $U = u(Z_1, \ldots Z_m)$

Constraints

Production

(2a) $Z_i = z_i(X_1, \ldots, X_n, t_i)$

Income

(2b) $Y_i = \sum_{i=1}^{n} P_i X_i + V$

Time

(2c) $T = \sum_{i=1}^{m} t_i + t_w$

First Order Conditions

Among Market Goods

(3a) $\dfrac{MU_{Z_i} MP_{Z_i X_k}}{P_{X_k}} = \dfrac{MU_{Z_j} MP_{Z_j X_l}}{P_{X_l}}$

Time Allocation - Household Production

(3b) $\dfrac{MU_{Z_i} MP_{Z_i t_k}}{w} = \dfrac{MU_{Z_j} MP_{Z_j t_l}}{w}$

Market Goods vs. Time Allocation

(3c) $\dfrac{MU_{Z_i} MP_{Z_i X_k}}{P_{X_k}} = \dfrac{MU_{Z_j} MP_{Z_j t_l}}{w}$

the respective item. A ratio comprises the consumer's assessment of whether one unit more or less of a good is worth the price which must be paid. Should an inequality occur then at least one good has a higher value of the last dollar spent. Purchases should be rearranged, more of X_i and less of X_j bought, until the ratios are equated. Assuming diminishing marginal utility, as X_i increases (decreases) MU_{X_i} falls (rises), thereby equating the values of the last dollar spent.

The household production approach is a utility maximization model which is consistent with the circular flow diagram. A complete mathematical discussion of it is in Becker [1]. Decision making is not restricted to the final goods market alone. Resource allocation, or interaction with the factor market in Figure 1, is part of the framework. Utility is derived from the use of commodities, Z_i, of which there are m. This is expressed as equation 1a. Commodities are considered to be the end results of household economic activitiy in which market goods and time are combined to produce desired items. The amount of transformation between market goods and time, t_i. The set of production relations are shown as equation 2a. In order to keep the subscript notation to a minimum, each production function has n market goods included, although it is recognized that some of the X_i may have a value of zero in the production of a specific Z_j. Leisure can be considered a commodity; because although time is an essential input, market goods are also necessary to derive utility from leisure. Purchases of market goods are limited by the ability to buy. Money income is disaggregated into earned and unearned components. Earned income is determined as the wage rate, w, multiplied by the number of hours worked, t_w. V denotes unearned income. Equation 2b is the budget constraint. The remaining constraint is that of time. Only a fixed amount of time per budget period, T, is available to a household. T must equal the sum of household production time plus time at work. This is equation 2c.

A household maximizes equation 1a subject to the constraints 2a through 2c. Consumer decision making focuses on the purchases of the X_i and the allocation of time among the t_i and t_w. The first-order conditions for the optimal solution to the problem can be shown as equations 3a through 3c. Examination of these equations involves straightforward economic interpretation and provides clear insight as to the economic pressures confronting a household. Unfortunately, much of the literature has not focused on the usefulness of these insights.

Either side of these equations can be interpreted as a value of the last dollar spent. The numerator indicates how changes in an input affects utility, and the denominator represents the opportunity cost of the respective input. The numerator could be called the marginal utlity product. It represents how a change in an input affects commodity production (the marginal product of X_k in producing Z_i is $MP_{Z_i X_k}$) which, in turn, causes a change in utility.[2] The cost is the final good's market price or the factor market wage rate.

Equation 3a holds whenever the household has made the optimal X_i purchases. How much X_i to buy is determined by the marginal product of the good in commodity production, the marginal utility the household places on the resulting change in Z_j, and the unit cost of the input. Similarly, time allocation in non-marketplace work is determined by the productivity of the time in producing Z_j, the marginal utility of Z_j, and the opportunity cost of such time which is the wage rate. The third equation isolates on trade-offs between market goods and time allocation. Both are needed in household production. Changes in time at work affect the amount of time available for household production, hence its marginal productivity. But changes in t_w also affect the income available for purchasing market goods.

How does a household arrive at the optimal solution? The adjustment can be outlined by replacing the equalities in equations 3a-3c with inequalities. Those inputs which have greater (smaller) values of the last dollar spent should be used more (less). Assuming diminishing marginal utility and diminishing marginal productivity, such reallocations move the household toward the optimal solution of the problem. For example, suppose the left-hand side of equation 3c is greater than the right-hand side. The household should increase its use of X_k and decrease its use of t_i. This lowers the marginal utility product of X_k for Z_i and raises the marginal utility product of t_i in Z_j. These changes serve to bring about an equality. Furthermore, the changes have to make the household better off. Because the left-hand side value of the last dollar spent increases (X_k increased) and greater than the right-hand side which decreases (t_i decreased), there has to be a net increase in utility.

The two columns of Table 1 summarize the similarities and diferences between the two approaches. With respect to the similarities, the following are noted. Both models assume that consumer behavior is not a completely stochastic process. Instead, consumer behavior is viewed as a systematic process in which utility is maximized subject to constraints. Both are static models, making no provision for borrowing or lending. The same assumptions about the manner in which preferences are formed are employed so that utility can be expressed as equation 1 or 1a.[3] The value of the last dollar spent is the consumer's guide in determining the optimal bundle of goods.

Distinctions between the models are significant, however. The determinants of utility are quite different. Decision making in the traditional model revolves around market goods alone. Resource allocation, household production, and the purchase of market goods are important components of the production model. These constraints describe a more realistic situation, and they comprise consumer activity in both markets of the circular flow diagram. Consumer demand for market goods is the end result of the traditional choice model. Consumer demand for market goods in the newer model is a derived demand. Market goods are not bought because they generate utility directly; rather, they derive their usefulness from their role as inputs in the production of commodities.

The last distinction is quite important in analyzing consumer market behavior. It allows for many more factors to enter into the analysis of the demand for final goods. Furthermore, this approach allows for an economic analysis of areas of consumer behavior which are ommitted from the traditional model. Production technology is important as it determines how the inputs of market goods and time generate the commodities. Changes in production technology, then, can affect consumer demand. For example, purchases of newer durable goods and convenience goods have the effect of reducing the time required to produce many household commodities.

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[2] Diminishing marginal productivity has the same analytical meaning as diminishing marginal utility.

[3] For a discussion of the axioms about consumer preferences, see Phlips [8].

One obvious consequence of the household production approach is to blur the traditional distinction between consumer economics and family economics (the former being concerned with individual's market activities, while the latter focuses on allocation decisions within the home). Note that in the household production approach, goods inputs purchased in the market are used in consumption in the home. Similarly, market participation results from prior decisions made in the home. As equations 3a-c make clear, equilibrium requires consideration of both home and market activites.

It may be useful to keep the ideas of consumer and family economics as a heuristic device, making it easier to organize the tremendous amount of material involved. However, that stops short of saying there is a clear distinction. Indeed, it may be more useful to emphasize the interrelationships among economic elements -- whether family or consumer -- than their unique qualities. The following illustrations demonstrate that point. Consumer oriented advertising should be directed toward providing household production information. Wages have a significant role to play, because the wage is the opportunity cost of time spent away from the factor market. The advantages of do-it-yourself versus hiring someone to do the work can be analyzed. Finally, the age distribution of household members is important in determining the marginal utility and marginal productivity of household time.

APPLICATIONS OF THE HOUSEHOLD PRODUCTION APPROACH

A Data Source for Estimation

Although the household production model provides a more complete, realistic framework for the analysis of consumer behavior, data requirements have been a major stumbling block to empirical investigations. The traditional model utilizes expenditure data, which have been available for some time on both a cross-section and a time-series basis. Empirical work with the new model requires much more information. How a family allocates its time to home production and to marketplace work must be known. It is a difficult, tedious, and expensive task to acquire such data. Total income must be separated into earned and unearned income. Relevant production data, including the price of utilities and the quantity used for the various commodities must be gathered.

A data source which provides much of this type of information is the University of Michigan, Survey Research Center's (SRC) 1975-1976 Time Use Survey. The objective of the project was to obtain accurate estimates of household time allocation so that the data could be used to generate estimates of the value of home production. A national probability sample was used. There were 1,519 respondents and 887 spouses comprising a total of 2,406 cases. Respondents were between 17 and 65 years of age, and they did not have to be married.

Applied Studies

The SRC data have been used to test three separate household production models. These studies were the dissertation research of three doctoral candidates in the Consumer Area at The University of Tennessee, Knoxville. A very brief overview of each research project is given below along with a summary statement of the significant economic conclusions.

One research project examined joint household production which is the generation of more than one commodity at the same time, Marlowe [5]. Among the important changes in the typical American household are the increase in the labor force participation of married women and husbands taking on a second marketplace job. These two changes decrease the amount of time available to the household for the production of commodities which could necessitate joint production.

The SRC data contain information on the amount of time married respondents spent in joint production during the week and on weekends. A household production model was created and tested for the amount of joint production time recorded by males and females. Variables found to have a significant and positive effect on home joint production time were education, unearned income, hours worked in the marketplace, and the number and ages of children.

Volunteer activities for charitable organizations have been examined using a household production framework, Peccolo [7]. The model developed in this study generated several hypotheses which are supported by the SRC data. Two measures of the volunteer commodity were used. One is the amount of time, hours worked per week in volunteer activities, and the other is the monetary contribution, annual dollars. Regression analysis identified the following variables as significant determinants of the two measures of volunteerism: wage rate, hours worked in the marketplace, the satisfaction associated with the commodity, and the respondent's religion.

Home repairs are another area of commodity production which has been examined, Garner [3]. Ten home repair commodities are identified in the time use survey data. The SRC data provided information as to whether the repair was made on a do-it-yourself or a contractual basis. Discriminant analysis is used to distinguish between the households having the two types of repairs. A household production model is constructed to identify the variables which discriminate between the two groups. Results indicate that the following variables have an effect on the likelihood of self-producing home repairs: household income, household size, respondent repair skill, respondent satisfaction in doing repairs, and age of the housing unit.

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SUGAR QUOTAS, THE NEW PROTECTIONISM AND CONSUMER WELFARE

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ABSTRACT

In recent years economic conditions in the United States and other developed countries have resulted in an increase in non-tariff barriers to trade.

The purpose of this paper was to examine the implications of the new protectionism for consumer welfare. The first part of the paper examines the impact of various trade restrictions on consumers and the economy as a whole. In the second part of the paper a recent trade restriction for sugar is analyzed. The analysis indicates the cumulative impact of trade restriction on the welfare loss and raises questions concerning the equity and efficiency of the new protectionism.

INTRODUCTION

In recent years economic conditions in the United States and other developed countries have been characterized by slow rates of economic growth, recessions and rising levels of unemployment. In many instances economic conditions have been aggravated by imports which have reduced the demand for domestically produced goods. As a result import impacted industries and workers in these industries have sought protection from imports. The response of government to petition for import relief has resulted in a new wave of protectionism which has resulted in sector agreements, quantitative restrictions, and antidumping actions. The growth of these non-tariff barriers to trade have negated the concurrent reductions in tariff barriers to trade (5).

Morkre and Tarr note that this development has been counter to the post World War II philosophy which was that "quantitative restraints should not be employed as a means of regulating international trade" (7, p. 169). The fact that quantitative restrictions are voluntarily accepted by the exporter, who is afraid of mandatory controls, has meant that the General Agreement on Tariffs and Trade (GATT) has been circumvented.

The purpose of this paper was to examine the implications of the new protectionism for consumer welfare. The first part of the paper examines the impact of trade restrictions on consumers and the economy as a whole and compares the welfare loss from quantitative restrictions to the welfare loss from tariffs. In addition methods for estimating both absolute and relative welfare losses are discussed. In the second part of the paper a recent trade restriction for sugar is analyzed. The analysis indicates the cumulative impact of trade restrictions on the welfare loss and raises questions concerning the equity and efficiency of the new protectionism.

THE IMPACT OF TRADE RESTRICTIONS ON CONSUMERS

Consumer losses from trade restrictions are both direct and indirect. The direct losses from higher product prices or reduced choice have been summarized by Bergsten as follows.

> "Consumers suffer from restriction on international trade in several ways. Tariffs raise the price of imported goods. Quotas and 'Voluntary' export restraint agreements reduce the quantity of foreign goods available. Thus they also raise prices. They also limit significantly the range of consumer choice by making some goods totally unavailable, both because of the low levels set by the quotas themselves and because foreign sellers can often reduce their losses from the imposition of quantitative controls by discontinuing lower priced items in favor of those with higher unit prices. Low-income consumers generally suffer most because low-price goods from abroad are the primary targets of U.S. import restrictions" (1, p. 2).

The indirect losses from trade restrictions include reduced competition and innovation on the part of protected domestic industries due to the reduction in international competition. Bergsten notes that international competition is of particular importance for industries "dominated by few large firms" since they tend to be unresponsive to the "usual pressures of the market" (1, p. 4). He states "only the Volkswagon forced Detroit to make a compact car and only foreign success with the oxygen process forced the U.S. steel firms to modernize." Bergsten's examples pertain to the acceptance of foreign innovation by domestic firms under the pressure of foreign competition. However, domestic firms may also undertake innovations on their own in an effort to meet competition from low-cost imports. Domestic producers may adopt more efficient production techniques and increase the capital intensive nature of the production process in order to compete with imports from low wage countries. Alternatively they may rely on product quality and design or product innovation to compete with imports. Such responses will either reduce prices or increase consumer choice in the domestic economy.

Comparison of the Welfare Loss from Different Trade Restrictions

Either tariffs or quotas may be used to increase prices in the importing country. There are two kinds of quotas -- mandatory quotas and "voluntary" quotas.

The latter are called orderly marketing agreements or voluntary export restraints and differ from mandatory quotas in that they are established with the consent of the exporting country.

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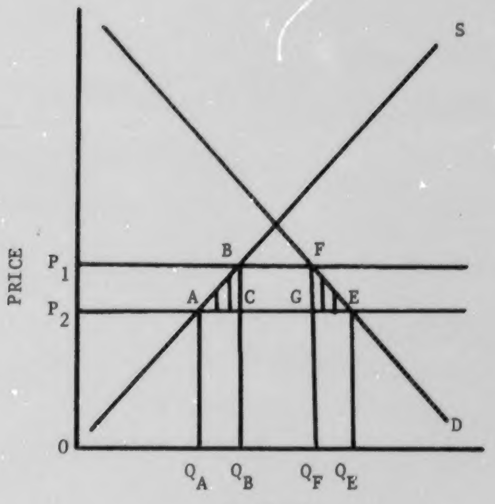
While a voluntary quota is more desirable than a mandatory quota in that trade reprisals from other countries are minimized, its effect on competition and prices is the same. Voluntary quotas also generate a higher welfare loss.

A comparison of the impact of tariffs and quotas is shown in Figure 1. In the initial situation the domestic price is given by P_1 with imports accounting for $Q_E - Q_A$ units and domestic production accounting for Q_A units. Imposition of a tariff shifts the world supply price from P_1 to P_2 with a resulting decline in imports to $Q_F - Q_B$. The loss in consumer surplus from the price increase is equal to the area P_1P_2FE. Part of the loss, however, is returned to the government in the form of tariff revenue - area CBFG. In addition there is a gain in producer surplus from the higher prices which is equal to the area P_1P_2BA. The deadweight loss from the tariff is equal to the two areas ABC and EFG. The first area represents a production efficiency loss when domestic production replaces lower cost imports. The second area represent a consumption efficiency loss as some consumers who were willing to buy low cost imports are forced out of the market due to higher prices.

FIGURE 1. Welfare Loss from a Tariff or Quota



Imposition of a quota limiting imports to $Q_F - Q_B$, could achieve the same price increase from P_1 to P_2 and entail similar gains and losses to producers and consumers respectively. However, the area CBFG, which is called the scarcity rent, may go to either the importing or exporting country. If the importing country auctions quotas, then the scarcity rent will accrue to the government in the same manner as tariff revenue. If the importer is free to select his source of supply among exporters, then the importer as opposed to the government will gain the scarcity rent. Mintz (6, p. 17) comments, however, that both these developments are unlikely and notes that "when quotas are assigned to specific countries, the exporters in these countries typically control the allocation of the quota and pocket the profit. This is always true of voluntary quotas which means high profits for selected foreign exporters -- profits which are, of course, a pure burden on the importer's economy." Voluntary quotas will thus result in a higher welfare loss than tariffs due to the loss of scarcity rent.

The relative loss from tariffs or quotas may also be obtained by comparing the net welfare loss to the gain in producer surplus. In the case of tariffs the relative cost of protection is equal to the deadweight loss from consumption and production (the two shaded areas in Figure 1) divided by the gain in producer surplus. In the case of voluntary quotas the relative cost of protection is equal to the deadweight loss from consumption and production and the scarcity rent divided by the gain in producer surplus. Again voluntary quotas will result in a higher relative cost of protections than tariffs.

A final comparison between tariffs and quotas relates to the degree of producer protection provided by the trade regulation. Most authorities agree that a tariff does not provide the same degree of protection to the domestic manufacturer as a quota since a reduction in world market prices will weaken the protective effect of a tariff. In contrast, a quota limits the quantity of foreign goods that may be imported irrespective of price changes. Mintz states "it is the predictability of imports and consequent security of the home industry which makes quotas a much stronger protectionist tool than tariffs." If the voluntary marketing agreement is limited to a few countries, however, their effectiveness is likewise limited since non-participating countries may respond to the export opportunity created by such agreements.

The above discussion is particularly relevant in view of the growing importance of quotas in trade regulation policies. Bergsten stated in 1972 that the "U.S. now has an array of quotas and 'voluntary' export restraints which have an even greater price effect than tariffs. Indeed they cover commodities which represent about $100 billion of U.S. consumption and make up 15-20 percent of the entire Consumer Price Index" (1, p. 3). Continuation of this pattern throughout the 1970's was noted by Morkre and Tarr.

> "In recent years, the United States and EC have turned increasingly to quantitative restraints (QR's) to restrain trade. In the United States the principle form of QR is the Orderly Marketing Agreement (OMA) and its predecessor the Voluntary Export Restraint (VER)" (7, p. 169).

Costs of Tariffs and Quotas

There have been several studies concerning the costs of tariffs and non-tariff restrictions. One estimate by Bergsten ranged from $10 billion to $15 billion. Major areas included oil quotas ($5,000 million), textiles ($2,500 to $4,800 million), and agricultural products. Bergsten (1) estimated the following costs for agricultural commodities:

> "Sugar imports are also subject to quotas and U.S. sugar prices have generally been about twice as high as world market prices in recent years. The annual consumer cost is about $500 million. 'Voluntary' restraints by the major foreign suppliers of fresh and frozen meat probably cost the U.S. consumers about $350 million annually and hit low-income families with particular severity because most meat imports are used in the manufacture of lower cost items such as frankfurters and hamburgers. Tight quotas on imports of dairy products add about $500 million more to the annual consumer's bill."

Mintz's estimates were somewhat higher than Bergsten's and ranged from $580 to $700 million a year for sugar quotas and were $600 million for meat quotas.

More recent estimates are available from Morkre and Tarr (7) and Decker (2). Morkre and Tarr estimated consumer losses from the use of Orderly Marketing Agreements (OMA's) for nonrubber footwear in 1980. The two countries affected by the agreement were South Korea and Taiwan. Annual consumer losses were $288 million. A smaller annual loss of $49 million were observed in the case of CB receivers where a tariff was imposed. Decker examined the impact of a voluntary export restraint (VER) for Japanese automobiles. Consumer losses in the Japanese automobile market ranged from $460 million to $560 million for the first year of the VER. In addition some upgrading of product lines occurred, an outcome which had been mentioned by Bergsten.

One interesting finding by Morkre and Tarr pertained to the results of an OMA with Japan for color television. At the time of the OMA (1977) Japan was the dominant supplier so that higher prices were anticipated. However the incentives created by the OMA which encouraged countries such as Korea and Taiwan to establish TV industries combined with the appreciation of the yen meant that the OMA was less restrictive than anticipated. Thus, "the welfare costs to consumers and the inefficiency losses to the U.S. economy have been marginal" (7, p. 87). This indicates the importance of alternative sources of supply in determining the impact of a quantitative restriction.

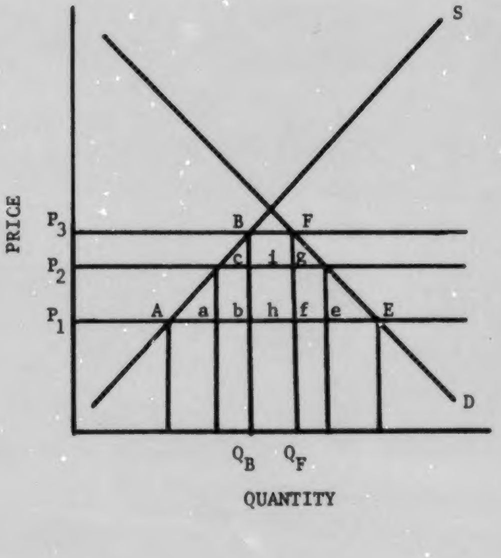
SUGAR QUOTAS

Sugar import quotas were imposed by President Reagan on May 5, 1982. Their purpose was to raise the price of sugar in the U.S. to the market stabilization price of 19.88 cents a pound, a result which could not have been achieved by increasing tariff rates due to statutory limitations on the degree to which tariff rates could be increased. As a result the domestic sugar producers are now protected by a combination of tariffs and quotas. The purpose of this analysis was to examine the absolute and relative cost of protecting sugar producers and to illustrate the equity/efficiency aspects of the new protectionism.

Welfare Loss Model

The welfare cost of a combined system of protection (tariffs and quotas) is given in Figure 2. Again P_1 represents the world price in the absence of trade restrictions while P_2 is the price once the tariff is imposed. Imposition of a quota limits the quantity that may be imported to $Q_F - Q_B$. As a result, the price increases to P_3. The loss in consumer surplus from the total change in price from P_1 to P_3 is equal to F_1P_3FE while the gain in producer surplus from the price increase is equal to P_1P_3BA. In addition, there is a gain in tariff revenue (area h). The welfare loss due to the tariff and quota is then given by the areas a, b, c, e, f, g, and i. The areas a and e represent the cost of the tariff while the areas b, c, f, g, and i represent the additional cost of the quota once a tariff is in effect. The quota cost has three components. The first component is the loss in tariff revenue due to the reduction in imports (areas b and f). The second component is the loss due to increased domestic production and reduced domestic consumption (areas c and g) while the third component in the loss in scarcity rent (area i). This loss would not have been incurred under a tariff.

FIGURE 2. Welfare Loss from a Tariff and Quota



The model must be modified to reflect the fact that one component of the tariff is eliminated when the quota is successful in increasing the U.S. price. As a result of the fall in the tariff rate, when a quota is in existence, the scarcity rent (area i) increases while there is a corresponding reduction in the tariff revenue (area h). The other results are unchanged.

Data Used in the Analysis

The welfare loss for sugar was based on the tariff rate and the estimated price impact of the quota. According to an article in Regulation, the price of imported raw sugar was 15.1 cents a pound in July, 1982 (9). This included shipping costs of 1.5 cents a pound and tariffs costs of 6.2 cents a pound. (The tariff rate declines to 2.81 cents a pound once the quota is in effect.) Assuming that the quota would succeed in raising the domestic sugar price to 19.88 cents a pound then the price impact of the quota is 4.78 cents a pound. Data were also available from the International Trade Commission concerning domestic production and consumption of sugar before the quota. As a result of the quota the quantity of raw sugar imported will decline from 7.60 billion pounds to 3.36 billion pounds per year.

The final data requirements were the price elasticities of demand (n_d) and supply (n_s). The implicit price elasticity of demand for imports (n_m) is 1.76 based on the percentage increase in price and the percentage reduction in quantity due to the quota. A price elasticity of demand of 0.2 was used, based on results reported in the literature (4). The price elasticity of supply was then estimated from the following equation.

$$n_m = n_d (D/M) + n_s (S/M) \text{ where} \qquad (1)$$

D = quantity of domestic consumption

S = quantity of domestic production, and

M = quantity of imports.

All quantity and elasticity values pertain to the pre-quota situation. A price elasticity of supply of 0.82 was obtained which is within the range reported in the literature (7).

Welfare Loss Estimates

The impact of sugar quotas in 1982 is given in Table 1. The loss in consumer surplus is equal to $888 million while domestic producers and foreign producers gain $626 million and $276 million respectively. In addition the U.S. loses $260 million in tariff revenue due to the reduction in the quantity of imports and $114 milion due to the reducion in tariff rates. The absolute welfare loss is equal to the loss in consumer surplus and in tariff revenue ($1,262 million) minus the gain in producer surplus or $636 million. The relative welfare loss (absolute welfare loss divided by the gain in producer surplus) is equal to 1.01 which means that every dollar received by U.S. sugar producers costs U.S taxpayers and consumers $2.01.

TABLE 1. Impact of Sugar Quotas ($ million)

Loss to U.S. Sugar Consumers	888
Gain to Foreign Sugar Producers (Scarcity Rent)	276
Gain to U.S. Sugar Producers	626
Tariff Revenue Loss (reduction in imports)	260
Tariff Revenue Loss (reduction in tariff rates)	114

It is also of interest to compare the absolute and relative welfare losses of tariffs and quotas. The data are given in Table 2. The absolute welfare loss for tariffs is $170 million compared to $636 million for quotas. However, the change in produce surplus is fairly similar ranging from $598 million for tariffs to $626 million for quotas. As a result, the relative welfare loss ranges from 0.28 for tariffs to 1.01 for quotas. These differences reflects the cumulative impact of trade restrictions and the higher welfare loss from quotas as opposed to tariffs. The combined effect of tariffs and quotas results in an absolute welfare loss of $806 million and a relative welfare loss of 0.66.

TABLE 2. Absolute and Relative Welfare Loss from Trade Restrictions[a]

Restrictions	Absolute Loss ($ million)	Change in Producer Surplus ($ million)	Relative Loss (%)
Tariffs	170	598	28
Quotas			
Dead Weight	100		
Tariff Revenue	260		
Scarcity Rent[b]	276		
Total	636	626	101
Tariffs and Quotas	806	1,224	66

[a] Assumes that the sugar quotas are only designed to aid U.S. sugar producers.

[b] Includes the loss in tariff revenue due to the reduction in tariff rates.

The role of sugar quotas as a form of foreign aid was also discussed in the article in Regulation (9). It was pointed out that the sugar quotas might have two objectives: The first objective is to assist the domestic sugar producer while the second objective is to assist selected foreign countries. Sugar quotas are thus a substitute for the Carribean Basin Initiative which had been changed by Congress to a program with limited United States control. If sugar quotas had two objectives then both the gains to domestic and foreign sugar producers should be deducted from the loss in consumer surplus and in tariff revenue to obtain the welfare loss.

The revised welfare loss estimates are given in Table 3. Welfare losses are unaffected in the case of tariffs but decline in the case of quotas. The absolute welfare loss of quotas declines by $276 million while the change in producer surplus increases by $276 million. As a result the relative welfare loss of quotas declines from 1.01 to 0.40. When tariffs and quotas are combined the absolute welfare loss is $530 million while the relative loss is 0.35.

TABLE 3. Absolute and Relative Welfare Loss from Trade Restrictions[a]

Restrictions	Absolute Loss ($ million)	Change in Producer Surplus ($ million)	Relative Loss (%)
Tariffs	170	598	28
Quotas			
Dead Weight	100		
Tariff Revenue	260		40
Total	360	902	
Tariffs and Quotas	530	1,500	35

[a] Assumes that the sugar quotas are designed to aid U.S. and selected foreign sugar producers.

While these results are more favorable than those shown earlier it might be queried whether domestic sugar consumers should underwrite foreign aid expenditures rather than taxpayers. A similar comment might be made with respect to protection of the domestic sugar producer. The fact that sugar is a staple item in the food budget of many low-income consumers also raises serious question concerning the regressive nature of the sugar quota. Consumers with the least ability to pay are taxed in a manner similar to those with the greatest ability to pay. Unfortunately political feasibility rather than efficiency or equity considerations seem to dominate trade policy. As a result low income consumers are likely to bear a disproportionate share of the cost of protecting domestic industries and providing foreign aid.

DISCUSSION

The new protectionism which has developed in the past two decades has serious implications for consumer welfare. It has defeated the post World War II movement towards a reduction in trade barriers by replacing tariff barriers by non-tariff barriers. It is generally recognized that quantitative restrictions, in particular "voluntary" quotas impose higher losses than mandatory quotas or tariffs. However, such restrictions have played an increasingly important role in the regulation of imports. Morkre and Tarr give the major reason for the popularity of quantitative restrictions (QR's) such as Orderly Marketing Agreements (OMS's) or Voluntary Export Restraints (VER's).

> Despite the fact that QR's impose the additional costs on the domestic economy of expropriated profits by exporters and the potential for creating domestic monopoly power, they have become increasingly popular in the 1970's. Ironically it is precisely the feature of OMA's that makes them more costly to the domestic economy that makes them politically attractive. In general the exporting nation can be expected to be a major political obstacle in a protectionist effort. In offering an OMA, however, the exporting nation may be "bought off" by the possibility of expropriating the scarcity rents; this considerably reduces the possibility of retaliatory trade actions (7, p. 169).

The consumer is thus subsidizing both the domestic and foreign producer. Since most quantitative restrictions are regressive in nature this means that the burden of producer assistance is borne disproportionately by low-income consumers. Quantitative restrictions thus suffer from equity as well as efficiency limitations.

The dichotomy between producer and consumer interest in the case of free trade places a burden on consumer educators to alert consumers to the gains from trade and the losses imposed by trade regulations. Unfortunately as Milton Friedman notes consumer organizations have not been as active in this area as they might have been (3, p. 32). As a result trade restrictions which are detrimental to consumer welfare continue to be imposed. The situation is unlikely to change unless consumers become as highly organized and lobby as effectively as producers or workers. The dominance of producer interests in determining trade policies was recognized by Adam Smith more than two hundred years ago and his statement remain as true today as they were in 1776.

> Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer. The maxim is so perfectly self-evident that it would be absurd to attempt to prove it. But in the mercantile system the interest of the consumer is almost constantly sacrificed to that of the producer; and it seems to consider production, and not consumption, as the ultimate end and object of all industry and commerce.
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> In the restraints upon the importation of all foreign commodities which can come into competition with those of our own growth or manufacture, the interest of the home consumer is evidently sacrificed to that of the producer. It is altogether for the benefit of the latter that the former is obliged to pay that enhancement of price which this monopoly almost always occasions (8, pp. 287-289).

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THERE'S NO SUCH THING AS A FREE MARKET

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ABSTRACT

Food and nutrition policies should be based on accurate models of the marketplace. Using structural and production changes in the dairy processing industry for documentation, the argument is made that the "needs of production" have been more important determinants of dietary changes in the U.S. than the whims of consumer preferences.

Professionals involved in consumer issues are well aware that U.S. dietary patterns are somewhat problematic today. For the majority of Americans, problems of food habits are associated with the ingestion of excesses of either specific nutrients (i.e. fat, sugar, salt) or of total calories relative to metabolic needs. One estimate suggests that the annual health costs of poor nutritional status approaches $40 billion. (11,p 2) Yet another source states that the elimination of deaths linked to poor dietary habits would increase the average life expectancy of infants by 18 years, as compared with only the 2 years that would be added by the elimination of all deaths from cancer. (4,p 214)

Attention to this matter culminated in Spring 1980 with the publication of dietary guidelines for improved health and longevity by the U.S. Departments of Agriculture and Health, Education and Welfare. Not surprisingly, there is not a general consensus about what to do about the problem of dietary habits, nor about whether there is even a problem. Policies are currently being formulated in the U.S. (and in other countries) by representatives from the fields of health, agriculture, nutrition and consumer education, and the food processing and distribution industries. This paper is presented because of my concern that food and nutrition policies will be based on models of the marketplace which make erroneous assumptions about the sovereignty of consumers. Specifically, it will be argued that the "needs of production" of food industries during this century have been more important determinants of dietary changes than the whims of consumer preferences.

Dietary patterns are highly complex phenomena which defy any monocausal explanation even when attempting to understand changes in choices of food. The most popular theories have focused on food choices as economic acts, typically in a neo-classical framework. From this position, observers conclude that humans have their own irrational preferences to blame if the food they choose in an abundant market is not of optimum utility healthwise. The theory of welfare economics posits that each actor has an opportunity set of alternative lines of action, each having a relative cost. Choices are limited by individuals' means and by the costs of their opportunities. What this perspective does not address are the questions of what determines the opportunity set of an individual and what is the larger process of choice which generates the overall structure of opportunity sets comprising the economic decision-making process.

According to Samuels, "The opportunity set of the individual, within which he attempts a constrained maximizing equilibrium, is a function of the total structure of mutual coercion, grounded upon relative power." (10,p 65) the position of radical economists is that the choice-set of socially feasible options does not extend over all the technologically feasible alternatives. This is so because the available alternatives must be compatible with capitalist production. In order to illustrate the reasoning behind this conclusion, I draw your attention to Figure 1.

A DIETARY CHANGE MODEL

The consumption changes documented by the Senate Select Committee on Nutrition and Human Needs represent a series of "demand slopes" whereby relative prices and volume consumed have had different outcomes for various commodities. It is these demand slopes in stage four which serve as the focal point for neo-classical and liberal reformist theories about changes in dietary habits. For example, attempts are made to alter demands by means of consumer education and/or better labeling. Food consumption (stage five) has varied over time as new products have become available, old ones have become scarce or inconvenient, and as lifestyles have been transformed. Thus dietary habits have changed such that the nutritional value of some foods consumed has improved while that of others has deteriorated. Stage six is the object of concern and of emerging policies.

Although the predominant theories about food patterns have been relatively accurate for stages four through six, they have ignored the significance of what happens in stages one through three. Prior to the point where consumers and producers interact in the market, producers have employed various strategies and evolved into rational structures which have profound effects on the ultimate choice-set available. Stage one--the choice of strategies to strengthen a firm's market position--is impelled by Worry A, the fear that other firms will strengthen their respective positions at the former ones expense. Additionally, there is the fear that products will become obsolete due to a scarcity of raw materials or the discovery of a less expensive or more desirable substitute component.

The strategies of horizontal growth, geographic and class dispersion of markets, diversification, and mergers have led to new structures of food corporations (stage two). Although these struc-

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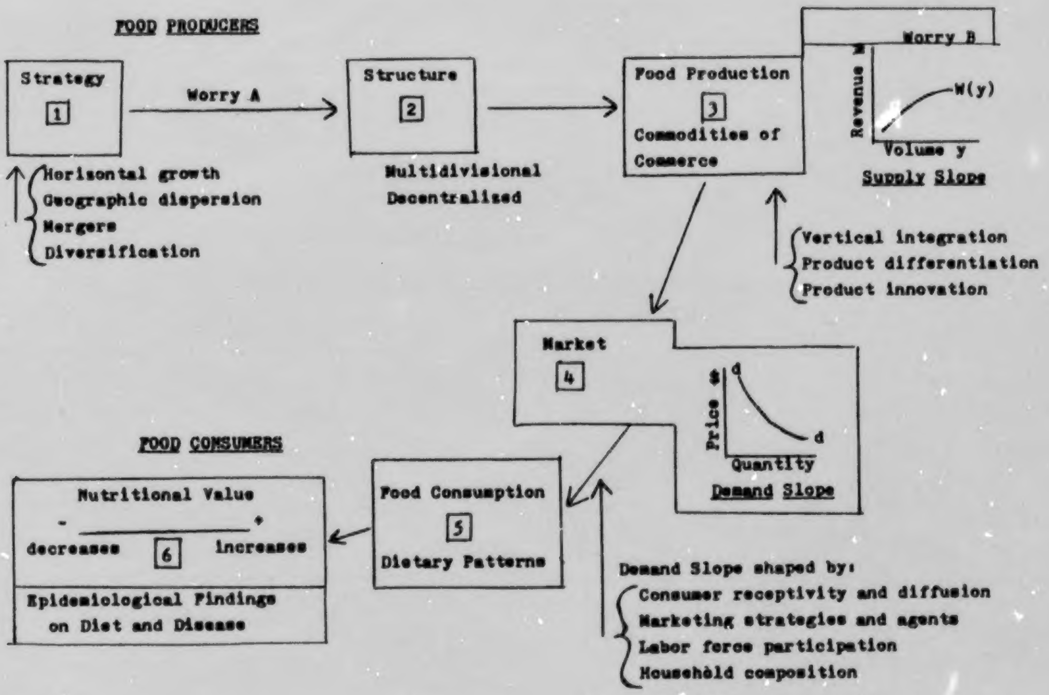
FIGURE 1: A MODEL--CHANGES IN DIETARY PATTERNS


FOOD PRODUCERS
Strategy
1
Worry A
Structure
2
Food Production
3
Commodities of Commerce
Worry B
Revenue W
W(y)
Volume y
Supply Slope
Horizontal growth
Geographic dispersion
Mergers
Diversification
Multidivisional
Decentralized
Vertical integration
Product differentiation
Product innovation
Market
4
Price $
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d
Quantity
Demand Slope
FOOD CONSUMERS
Nutritional Value
-
+
decreases
6
increases
Epidemiological Findings on Diet and Disease
Food Consumption
5
Dietary Patterns
Demand Slope shaped by:
Consumer receptivity and diffusion
Marketing strategies and agents
Labor force participation
Household composition

tures do vary somewhat, they are all multidivisional organizations. The management of each unit within an organization has as its goal to increase profits and/or improve efficiency. This decentralized structure can have an anarchic effect within a firm even as anarchy exists between firms and within the marketplace. Stage three represents the production of commodities of commerce where vertical integration becomes crucial to the maintenance of a firm's market share.

Backward integration--gaining control over raw materials and their transportation and processing--is effected in order to avert shortages and gluts which would reduce profits and control over production. Activities in this domain include Research and Development (R&D) aimed at finding substitute ingredients either because traditional commodities have become too expensive to procure, process, or store, or because other commodities have become so plentiful. In addition, processing techniques are invented to reduce loss due to spoilage.

R&D activities also play a role in forward integration of food firms. Product differentiation is instrumental in a firm's attempt to maintain and/or increase its market share of particular food products. This includes not only the marketing of products as unique in a field of poor imitations, but also the constant introduction of new products. The primary motivation for product proliferation is the potential for growth in corporate profits. (3) The source of that potential growth lies in the value-added components of new products since basic commodities are so difficult to differentiate. As firms are successful in convincing consumers that the new products are superior to old ones for a variety of reasons, the ultimate in forward integration has occurred. That is, firms have the power to influence consumer perceptions and thus, their preferences. Having accomplished that, Worry B--how to distinguish your products from those of competitors, how to make surplus profitable, and how to insure a certain volume of sales--has been alleviated, at least for a while.

By directing your attention to the effects of "supply slopes" rather than "demand slopes", I will demonstrate how changes in the food forms offered and promoted in the market have been predictable outcomes of producers' strategies to maximize their profits and control over the business environment. In order to illustrate this assertion, I will review the history of dairy product development during this century. By examining changes in the structure and strategies of one large firm in this sector, we can see the sequence of events as viewed in stages one through three.

A CASE STUDY OF DAIRY PROCESSING

The consumption of milk has been historically seasonal and confined to the immediate environs of production, not only because of the perishability of the product but also due to fluctuations in milk production by cows. Because of this characteristic of milk, it has required special handling and has caused considerable worry to producers desiring profitable disposal, especially when there is surplus. Because milk in its fresh form is very difficult to differentiate from the products of competitors, early growth strategies for dairy processing firms focused primarily on horizontal concentration and efficient production, growing from cottage industries to industrial factories. (5) However, rises in agricultural productivity and technological developments--both impelled by the drive for capital accumulation--had important influences on processors' growth strategies.

Whereas the stock of beef cattle has continually grown throughout this century, the number of dairy cattle declined from 23 million in 1947 to 13.5 million in 1967. Part of this decline is due to reduced use of dairy cattle for slaughter but it is also attributable to increased productivity of the animals. During the same period, the average annual milk production per cow went from 5,000 to 8,000 pounds. Even with the shrinking stock of dairy cattle, surplus milk production was still a problem because the per capita consumption was dropping. (12,p 1)

Maintaining sufficient milk supplies has been considered so important as a Federal policy that minimum prices processors can pay dairy farmers have been set in order to encourage the latter to stay in business. One of the consequences has been that processors have to look for profits in directions other than lowering the cost of their primary raw material. Consumer Reports claims the situation has encouraged price fixing as an oligopolistic market-share pooling strategy. (6) I would argue that the marketing-order system has also provided an incentive for focusing on value-added features of products and forward integration to aggressively convince consumers to eat more of all their products.

Early in this century as population became concentrated more heavily in urban areas, it became more expensive and controversial to keep dairy herds within city limits. Fortunately, it was possible to engage in the dairy business from more distant points by this time because of mechanical refrigeration, pasteurization, and more sanitary handling techniques that developed from the scientific and technological activities of the late nineteenth century. The logical outcomes were the development of dairy firms integrated to perform production, processing, and distribution tasks or specialization of functions, each on a larger scale. (5) It was only a matter of time before milk processing plants would be combined into regional and even national companies. Furthermore, the dairy firms would logically process more than fluid milk since they had control over the raw materials and byproducts.

After National Dairy Products Corporation (later to be known as Kraft Co.) was formed from two dairy firms in 1923, it went on to acquire six companies in 1924 and sixteen more in 1925. In the president's message to shareholders in 1925, he explained the rationale:

> The experience of your company has demonstrated that there is a real advantage both to the producer of milk and to the public in the combination of milk distributing and ice cream producing units because such a combination provides a natural market for the normal increased milk production during the summer months. (8:1925,p 2)

Up to 1928 when the annual report listed 71 companies as subsidiaries, National Dairy made acquisitions primarily for geographical expansion. Although the firm was taking steps to unify purchasing, accounting control, and technical research, it remained a holding company until 1956. This is an example of cases that are not at all unusual. When firms remain holding companies with decentralized operations and management, they defy one of the major arguments in favor of mergers--economies of scale in management. (7)

In 1929, the directors contracted to purchase the Kraft-Phenix Cheese Corporation, thus beginning the firm's strategy for diversification. The president wrote of that move:

> It is the opinion of the Board of Directors that the acquisition of this business will be of real value to the corporation as it will provide for an interchange of products and facilities of mutual advantage to both businesses. (8:1929,p 3)

Statements in the early annual reports of National Dairy suggest that R&D efforts were initially aimed at sanitation, better control over production, and efficiency of operations. But a major problem confronted the executives during the depression when price levels for dairy products declined while milk production exceeded demand. The Federal marketing-order system provided for higher prices going to farmers for drinking-grade milk. All farmers were required to have some of their milk go for manufacturing purposes (i.e. butter, cheese, milk powder), but it was obviously to their advantage to sell more drinking milk. For the processors, this policy meant that the profit margin for fluid milk was lower than for any other branch of the industry.

That condition was no doubt an incentive for processors to reduce the proportion of their operations dependent on fluid milk sales. For example, National Dairy claimed that while fluid milk accounted for 39 percent of its net sales in 1937, it provided only 22 percent of the total operating profits. (8:1937) In 1935 the firm announced the formation of its Sealtest System of Laboratory Protection, a centrally directed R&D system.

> The purpose of the Sealtest system is to maintain high standards of quality in the production of our products by

> daily, systematic laboratory supervision and to develop new commercial uses for milk. (8:1935,p 4. Emphasis added)

In addition to building more plants for cheese production and encouraging extended use of ice cream during the 1930s, National Dairy introduced mayonnaise, Miracle Whip salad dressing, and Kraft confections (caramels and butter toffee). The firm also produced more evaporated and condensed milk and milk powder specifically for feed and the baking industry. It is notable that except for the salad products, all of these items represent ways to use milk, cream, or butter such that their processing increases the value-added characteristics while also prolonging the shelf life. That is, they are solutions to the problems of surpluses and low profit margins. This assertion is supported by the fact that Beatrice, Borden, and Carnation also list some or all of these among their products. All four firms produce candy.

The nutritional consequences of these "solutions" are interesting as well. Ice cream and the two candies introduced during the 1930s are considerably higher in total and saturated fat than fluid whole milk and both have sugar or corn sweetener added. Cheese being a more concentrated food than fluid milk, has the potential for contributing more total calories and fat to the diet, since it is often consumed as a snack or in addition to other protein sources. In addition, cheeses tend to be high in sodium, having had salt added for flavor, processing, and preservation. The annual reports of National Dairy repeatedly report advances made in the aggregate and per capita consumption of all the dairy products they produce, claiming how beneficial this is for the public's health. Such data are generally presented with the impression that it doesn't matter in what form dairy products are taken since they are all part of the same food group. Of course, the Four Food Groups teaching aid relays the same message to the unknowledgeable.

From the late 1930s on then, it appears the focus of R&D activities was on product innovation and diversification with the pace picking up after the war. At National Dairy, innovation became noticeably faster around 1958. The firm had opened a new research laboratory on Long Island in 1948, with a larger staff of scientists and technicians. Then in 1958, they built an even larger facility in Glenview, Illinois, at which time R&D was designated a separate division of the corporation. The nature of the product diversification can be summarized as: the addition of new flavors, sizes, packaging, and conveniences to basic items such as ice cream, cheese, and milk; the introduction of non-dairy substitutes as well as foods other than dairy products: commercial development of dairy by-products appealing to a growing food service market; and, a notable record of contributions to the market for snack foods and confectionery.

The management of the firm has been consistently clear about corporate objectives and performance criteria. In 1947, the annual report claimed, "Our research program of product diversification continues with most satisfactory prospects." (8:1947,p 6) Further, officers of the company, believing that the profit margins were too low for what they were offering, reiterated the importance of mass production for corporate earnings.

> We hope that expanding volume and the efficiency resulting from our building and improvement program will enable us to hold our selling prices down and permit us to increase profit margins. (8:1949,p 5)

A major means for holding costs down is to effect some backward integration in company operations. It is understandable, for example, that processors would conduct research and try disseminating those findings and others to the people who produce the raw materials. Thus, National Dairy has not only used contracts for reliable milk supplies but also has consistently informed dairy farmers about herd management and "cooperated with" colleges of agriculture, agricultural experiment stations, and cooperative extension agents. (8: 1949) Furthermore, National Dairy and Carnation both manufacture animal feed from dairy by-products which they sell back to dairy farmers.

Other examples of this firm's backward integration include: building and acquiring vegetable oil refineries to supply its own needs for manufacturing margarine, pourable and non-pourable salad dressings, and nondairy coffee lightener and dessert topping; the acquisition of an egg breaking and processing plant providing inputs for ice cream, salad dressings, and candy; opening a facility in Maine to process Irish moss for stabilizing and emulsifying agents for soups, gravies, and chocolate drinks; developing a unit to produce such things as flavoring and emulsifying agents, carbonated beverage base, and concentrate base for iced tea and other beverages; and, the acquisition of Metro Glass Company to produce food product containers. Most of these operations produce for direct sale of the ingredients as well as for the corporation's needs. (8:1950, 1951, 1952, 1956, 1962, 1971)

There is one last dairy product of interest here because of its spectacular rise in popularity in recent years. Although yogurt has a long history, it has only been in the last ten or fifteen years that it has been nationally available and familiar. It is not clear when National Dairy first introduced yogurt or in what form, but Sealtest yogurt is first mentioned in the 1954 annual report. There were no further references to yogurt until 1965, when it was announced that Breakstone had added two fruit flavors to its line. Then during the 1970s, Breyers and Light n' Lively brands introduced full lines of fruit flavored yogurt. The only explanation given in annual reports for these products is that they reflect consumer interest in high quality dairy products with lower fat or caloric content. Such a statement is in keeping with the theory of consumer sovereignty since "demand slopes" appear to be directing production changes.

However, examining stages one through three of the model suggests otherwise. For example, in trying to explain the fourfold increase in per capita yogurt consumption during an eight year period, one source suggested it was due to innovations in the industry and the use of fruit flavors.

> The addition of flavors, fruits, and preserves to yoghurt has become very popular in recent years. ---Flavored yoghurt has a definite advantage over the plain yoghurt in that the harsh acidity in the product is less pronounced, the incidence of objectionable off-flavors is reduced, and much of the need for concentrating milk is eliminated. (12,p 40)

The advantages derived from having greater control over the end products and reducing the cost of processing provide support for my assertion about the role of the needs of production in determining product innovation. Yogurt is a product with a longer shelf life and greater value added than fluid milk while seeming to be a low calorie, low-fat alternative to cheese and ice cream. Since there is no FDA standard of identity, manufacturers can use whole milk, low-fat, skim, evaporated, or dry milk as well as stabilizers such as gelatin and modified food starch. This results in a product that can range in butterfat content from 0 to 5 percent and in solids content from 9 to 20 percent of the finished yogurt. For an 8-ounce serving, the caloric value ranges from 125 for plain, nonfat milk yogurt to 280 for whole milk yogurt with fruit flavor added. (9) The "needs of production" argument can also be invoked where flavor, style, and brand proliferation are concerned. According to Henderson, "The special facilities required for these operations (cultured products) require large volume production in order to secure economical costs." (5,p 426)

To complete the picture of what takes place prior to the point at which producers and consumers come together in the market, we need to consider attempts by firms at forward integration. For it would be highly irrational for firms who have invested so much and fought so hard to outmaneuver competitors in the race for corporate growth to leave purchase decisions completely up to chance. Just as political candidates attempt to persuade voters of their superiority, consumers are persuaded that particular brands and new products are the only ones worthy of their dollar votes. In the case of dairy products, processors have an advantage in that their products have an entire food group designated to them, thus making consumers more receptive to incorporating them into their diets. Dairy processors have capitalized on this in their advertising and promotional programs, and as previously mentioned, do not distinguish the nutritional qualities of their various products.

There is probably no more familiar brand of dairy products in the U.S. than Kraft. Among the most vivid memories of my childhood are the attractive and appetizing recipes demonstrated on the Kraft Television Theater which had its inception in 1947 and aired weekly for more than two decades. In 1965 it was reported that "Full color was used on a larger scale than ever before both in print and in television to show more vividly the many appetizing and attractive uses of our food products." (8:1965,p 13) Of course, these recipes as well as ones for the Sealtest division were generated by the company's test kitchens, well funded and highly visible activity centers for the firm. In addition, National Dairy has a long history of distributing printed materials on food preparation and nutrition not only to homemakers but also to children and their teachers. The latter materials were first mentioned in the firm's 1946 annual report and in 1973, they boasted that Kraft Foods' educational program, which was in its fourteenth year, reached more than half of the nation's teenagers. (8:1973,p 10)

The firm has also made extensive use of in-store displays that are bright and eye catching, appealing to impulse buying decisions. Such promotionals are in the retailers' interests since faster turnover of inventory makes for higher profit margins in their operations. As if all these socialization techniques were not enough for effecting forward integration, National Dairy has also gone heavily into supplying the restaurant and institutional food industry. Thus, even consumers who take their meals away from home may be receiving more amenities or services, but they are often unknowingly eating the same food they would at home if they depend on prepared convenience foods. (Note dairy products are not alone in this trend as many of the large corporations that manufacture for the consumer market also produce for food service facilities.)

CONCLUSIONS

The material reviewed here about one firm in one sector of the food industry is part of a much larger research project. I believe it illustrates my reasons for questioning the efficacy of leaving consumer welfare completely to a market mechanism. Aside from the problems of incomplete, conflicting, or confusing consumer information, the model presented indicates that consumer sovereignty is a very weak theory where the determination of production decisions are concerned. Producers of food (as well as other commodities) are highly organized, efficient, and motivated to maximize their profits and their control over conditions of business. On the other hand, consumers are dispersed, having no identity as a class and underdeveloped notions of what consumption decisions are in their best interests. To the extent that consumers depend on processor determined formulation of their diets, they are little more than captives in the market.

This dichotomy in itself represents obvious differences in power with respect to what food products will be offered in the market. However, even more importantly, this model argues that not all technologically feasible alternatives are offered in the market and those which are have more to do with the needs of production than of consumption. Policies that are formed and implemented to improve the nation's nutritional status must examine what happens in stages one through three prior to reaching the market. Otherwise, consumer and nutrition educators will continue blaming the victims for choices over which they have very little control.

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LESSONS CONSUMERS CAN LEARN FROM THE ERRATIC ECONOMY

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ABSTRACT

Consumers have been plagued by an economy which can be characterized as erratic during the past decade. This paper attempts to give some order and understanding to the erratic economy by presenting logical explanations for its occurrence. The paper focuses on explaining three key variables: inflation, interest rates, and recession. It is argued that sustained increases in monetary growth cause increased inflation, that increasing inflation causes increasing interest rates, and that recession is the initial, inevitable, but temporary result of national policies designed to reduce inflation. Using recent empirical results for the relationship between changes in monetary policy and changes in inflation and interest rates, a framework is designed for consumers to anticipate changes in the economy.

INTRODUCTION

Consumers have ridden an economic rollercoaster during the past decade. It seems that consumers have either been subjected to periods of rising inflation, rising interest rates, and falling unemployment or periods of falling inflation coupled with rising unemployment and stagnant interest rates. The periods 1971-73 and 1976-79 fall into the first category and the periods 1974-75 and 1980-82 comprise the second category. Consequently, changes in consumer purchasing power (real disposable personal income) have been uneven, both rising and falling in the past decade. In short, consumers have experienced an "erratic" economy during the past decade.

Much mystery and confusion prevail about the causes of the erratic economy. Our economic woes have been blamed on OPEC, oil companies, tax increases, tax reductions, "easy" money, and "tight" money to name a few. This paper attempts to give some order and understanding to the erratic economy by presenting logical explanations for its occurrence. The explanations are drawn from elementary macroeconomic theory. Implications for consumer behavior are developed by focusing on lessons which consumers can learn about three key economic variables: inflation, interest rates, and recession.

LESSON 1: INFLATION

"Inflation is always and everywhere a monetary phenomenon..." wrote Milton Friedman [6]. This sentence sums up both the cause and control of inflation as stated by the monetarist school. Inflation, which is a sustained increase in the average level of prices in the economy, occurs when the money supply consistently grows faster than the quantity of goods and services produced in the economy.

The Inflation Process: Theory

The monetary-inflation relationship has been described in detail (see [10] for example) and will only be summarized here. The central link is the equation $M \cdot V = P \cdot Q$, where M is the nominal money supply, V is the velocity of circulation of money, P is the average price level, and Q is the economy's quantity of goods and services. Given that: (1) velocity is a function of variables independent of the money supply, or velocity changes at a much slower rate than does the money supply; and (2) output in the economy (Q) grows independently of the money supply, then an increase in the money supply increases the average price level. Dynamically, the rate of increase in average prices equals the difference between monetary growth and economic growth. A sustained excess of monetary growth over economic growth results in a sustained increase in the average level of prices, or inflation. Since government (in the U.S., the Federal Reserve System) controls monetary growth (i.e., growth of the monetary base), inflation is a problem resulting from an excessive monetary growth policy of the government.

The process by which monetary expansion leads to inflation involves banks and changes in credit supply. The government's central bank (hereafter termed the Fed) increases the money supply by purchasing federal securities from private banks and consequently augmenting their reserves. Given more reserves, banks increase the amount of credit which they offer. A greater supply of credit results in lower interest rates charged to borrowers and therefore more borrowing and spending by consumers and firms. But if the rate of increase in spending exceeds the rate of increase in goods and services produced in the economy, excess demand for goods and services results and prices consequently rise. If the Fed continues to increase reserves at a rate faster than the economy's growth rate, sustained price increases, or inflation, result.

The Inflation Process: Debate

The monetarist view of inflation has both its strong proponents and critics. One of the major criticisms is that the Fed cannot control the money supply [10, p. 57]. As evidence, these critics cite recent fluctuations in and substitutions between the various monetary aggregates (e.g., M1, M2, M3). Monetarists respond that the Fed cannot control, and should not try to control, the various monetary aggregates. Instead, the monetarist explanation of inflation is based on the Fed controlling the source of monetary expansion, bank reserves.

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Other critics of monetarism, who may grant that the Fed's monetary policy influences inflation, contend that the Fed merely pursues a reactionary, passive policy dependent upon changes in real prices and wages [10, p. 59]. For example, if a major product such as oil increases in price, or if a major labor union negotiates a large wage pact, this view states that the Fed "monetizes" such price increases by correspondingly increasing the money supply. Of course, such a policy, termed monetary accommodation, ultimately results in all prices rising, but the point of the critics is that the Fed's actions are triggered by other factors. Hence, these other factors (a major price or wage increase) are the actual causes of inflation.

The monetarist reply to this argument is simple. A policy of monetary accommodation requires a direct decision by the Fed to inflate. In the absence of monetary accommodation, individual price increases do not result in inflation [7, pp. 59-60]. Consider an increase in oil prices. With the money supply unchanged (or, more technically, with the difference between the rate of monetary growth and the rate of economic growth unchanged), consumers and firms must eventually reduce their expenditures on (and demand for) other goods and services in order to afford the higher cost of oil products. The reduced demand for non-oil goods and services eventually causes a reduction in the prices of these products (or, more technically, a reduction in the rates of price increase of these products). These price reductions counter the oil price increase and the result is no change in average prices (or, more technically, no change in the rate of change of average prices). Of course, relative prices are changed (e.g., oil products are relatively more expensive).

Finally, another line of criticism of the monetary explanation for inflation is that it is inconsistent with reality. Consumers and firms observe inflation resulting from price increases filtering up the production chain [1, pp. 20-21]. For example, consumers observe retailers raising prices. But retailers are merely passing on the higher prices charged by wholesalers, and wholesalers are merely passing along the higher prices charged by manufacturers, who in turn are passing on the higher prices and wages of basic inputs. Therefore, inflation must ultimately result from price increases of basic inputs.

There are two flaws with this "cost-push" argument. First, for an initial input price increase to stimulate an increase in all prices (that is, for inflation to result) it must be "ratified" via monetary accommodation. This requires a decision by the Fed to inflate. Second, the cost-push argument confuses effect with cause [1, pp-25-26]. The stimulus of inflation is not a unilateral increase in input prices. Rather, the stimulus is excess demand generated by excessive monetary growth. Excessive monetary growth generates excess demand at every level of the product chain until it reaches the input level where prices are bid up. Higher input prices are then merely filtered up to the manufacturing, wholesale, and retail stages.

The Inflation Process: Evidence

The relationship between monetary growth and inflation has been estimated in numerous studies [2, 3, 8, 9]. All suggest a lag between monetary growth and inflation.[2] For example, most recently Carlson [3] estimated a mean lag of five quarters (1.25 years) between monetary growth and inflation. This means that half the impact of monetary growth on inflation occurs before five quarters and half occurs after five quarters. The full impact of monetary growth on inflation was estimated to occur within eight quarters (2 years).

Of course, these results also mean that a decline in monetary growth will not have an immediate impact on reducing inflation. This has important implications for an anti-inflation policy, as will be seen in a later section. Recent theoretical work suggests, however, that as economic agents learn about the consequences of monetary policy, the lag between monetary growth and inflation should decline [5].

LESSON 2: INTEREST RATES

Why do interest rates exist? The reason is quite simple. People would rather have money now than in the future. The future is uncertain, the present is known. The individual cannot predict with certainty his circumstances in the future. On the other hand, money received today can always be saved for use in the future, if the individual so desires. Therefore, most individuals must be paid in order to give up (loan) money which they possess today and are promised to have returned in the future. The payment on such loans comes in the form of interest payments by the borrower to the lender. The interest rate, termed the "real" interest rate, necessary to attract money for loans averages 3 to 6 percent per year for each dollar loaned depending on the risk of the loan.

Why, then, don't we observe interest rates today in the 3 to 6 percent neighborhood, as was observed in the early 1950's? The answer, of course, is inflation. Inflation, to re-emphasize, is an increase in the general price level. Therefore, inflation has the effect of reducing the value, or purchasing power, of a dollar. With respect to dollars to be repaid on a loan, future inflation reduces the purchasing power of those dollars. Lenders, therefore, are very aware of the impact of inflation on loan repayments. For example, if a lender charges 4 percent on a loan of $1 for a year, the lender receives $1.04 at the end of the year. However, if the general level of prices increased by 10 percent during that year, the purchasing power of the $1.04 is only 94.5¢ ($1.04/$1.10); the lender effectively loses money on the loan (5.5¢ per $1 loaned in this example). For this reason lenders try to project what the average annual inflation rate will be over the terms of their loans. This "inflation premium" is then added to the real interest rate necessary to attract and loan money. The inflation premium protects lenders against the loss of purchasing power on repaid dollars.

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[2] The theoretical reason for the lag is that producers initially cannot distinguish between permanent excess demand generated by sustained excessive monetary growth and temporary excess demand generated by random factors. Only after the excess demand continues for a sustained period will producers contract for more resources and bid up prices [see 3].

The major reason for movements in interest rates is changes in expected inflation rates.[3] As the expected inflation rate rises, interest rates rise; as the expected inflation rate falls, interest rates fall.[4] As was argued in the first section of this paper, changes in inflation rates are primarily a function of changes in monetary growth vis-a-vis economic growth. Consequently, if the difference between monetary growth and economic growth becomes permanently larger, interest rates ultimately rise. Conversely, if the difference between monetary growth and economic growth becomes permanently smaller, interest rates ultimately fall. However there are important short-run and long-run differences in the relationship between monetary policy and interest rates. These differences have significance for the next topic, recession.

LESSON 3: RECESSION

In order to reduce inflation, it was argued that the Fed must follow a policy that reduces the growth rate of the money supply and brings it more in line with the growth rate of goods and services produced in the economy. However, one initial result of such a policy is usually the onset of an economic recession. A recession occurs when the output of goods and services produced in the economy does not increase for a sustained period of time (e.g., six months). The reason a recession occurs when the Fed "fights" inflation is as follows: The real interest rate is determined by the supply and demand for credit. The Fed reduces the growth of money by reducing the growth of reserves to banks and, consequently, reducing the growth of credit which banks can make available. However, consumers and firms don't interpret, for various reasons, this change in monetary policy as immediately meaning a permanent reduction in inflation.[5] Therefore, no immediate change occurs in the growth of demand for credit by consumers and firms. Consequently, the price of credit (the real interest rate) rises. With credit relatively more expensive, consumers and firms reduce their rate of borrowing. Business expansion slows and consumers reduce additional purchases of homes, cars, and other goods usually bought on credit. Firms notice their products not selling as fast as before and their inventories rising. As a result, new hirings are reduced, and after a time, some current employees may be dismissed as many firms draw down on their inventories, reduce purchases, and lower production of new goods and services. In short, the economy slows down. Most consumers, therefore, find their income not increasing as much as it had been, and many consumers actually find their income reduced. These consumers reduce purchases, reinforcing the economic slowdown.

The beneficial result of a recession is a decrease in inflation. Since new spending in the economy falls, buyers don't compete as hard for products and prices stop rising as fast as they had been. Similarly, with new hirings reduced, firms don't compete as hard for workers and wages rise at a slower rate.

How long will a recession last? The key is what firms and consumers anticipate will happen to the economy, particularly regarding inflation. When firms and consumers believe that inflation has been permanently reduced for the foreseeable future, then prices will be expected to rise less rapidly. With prices (including wages) expected to rise less rapidly in the future, firms and consumers reduce their estimates of credit necessary to finance purchases. This revision has the effect of reducing the growth in the demand for credit consistent with the lower growth of money (and credit) supplied by the Fed. Consequently, the price of credit, the real interest rate, falls to its pre-recession level. This stimulates firms and consumers to increase their borrowing and spending to the levels that existed before the recession. Consumers now find that lower wage and salary increases are adequate to meet expected future expenditures. Observed interest rates are lower due to the lower real rate component and the lower inflation premium.

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[3] In the debate over the economy's performance in the early 1980's, much concern has been expressed about the impact of actual and projected federal budget deficits. Many economists have dismissed budget deficits, in both theoretical and empirical work, as having any impact on the real economy. However, if budget deficits are assumed to increase the relative demand for credit, then some empirical results show that for every one percentage point increase in the deficit/GNP ratio, real interest rates rise by one percentage point [4]. At this rate, the relative increase in the budget deficits could account for a 3.8 percentage point increase in the level of interest rates between 1980 and 1983.

[4] Interest rates of different terms can rise and fall at different rates as lenders' estimates of future inflation vary for different terms.

[5] One reason may be that consumers and firms don't understand the significance of changes in monetary policy. Probably a better reason is that, given past policy reversals of the Fed, a change in monetary policy needs to be sustained for it to have an impact on inflationary expectations.

Therefore, the key for economic recovery, without inflation, is for firms and consumers to be convinced that inflation will be lower in the future. Central to this belief is a conviction that the Fed will not revert to policies that lead to inflation. Of course, the Fed can engineer an economic recovery by re-inflating. This reduces real interest rates to their normal range but also rekindles inflation.

IMPLICATIONS FOR CONSUMERS

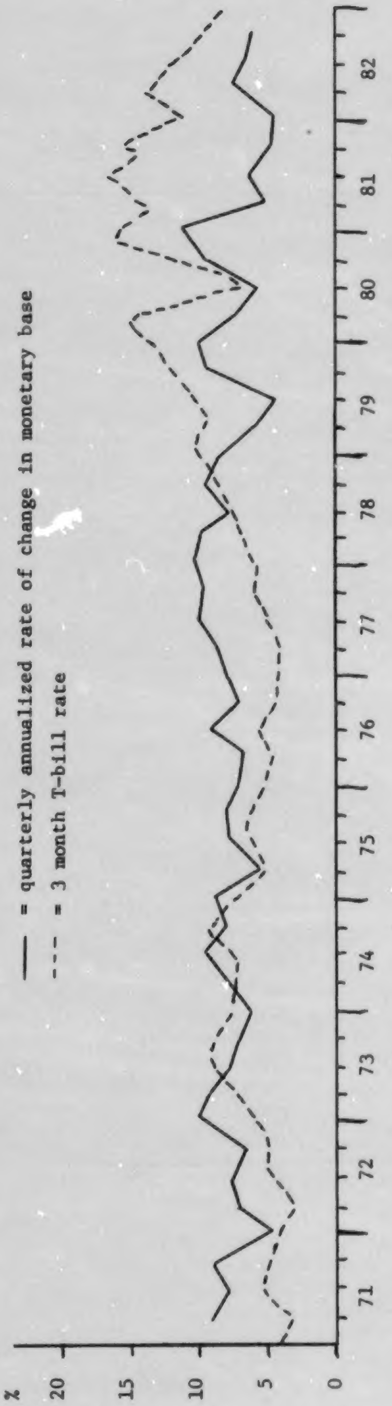
The previous discussion presents a framework for understanding the erratic economy of the 1970's and 1980's. Perhaps more importantly, the framework can be used for projecting future changes in the economy.

The major factor in generating the erratic economy, it was argued, has been the monetary policy of the Federal Reserve System. A monetary policy resulting in a sustained rate of money growth greater than economic growth produces sustained price increases, or inflation. Higher inflation increases the inflation premium included in interest rates, thereby pushing interest rates higher. Therefore, the way to reduce inflation and interest rates is to reduce the rate of monetary growth to a range much closer to the average rate of growth of the economy.

However, both theory and evidence indicate that there are significant short-run and long-run differences in the consequences of a change in monetary policy. These differences are the central cause of the erratic economy. The immediate (0-12 months) impacts of a sustained increase in the difference between monetary growth and economic growth are lower interest rates and a temporary "boom" in the economy. However, the long-run (post 12 months) impacts are higher inflation and higher interest rates. Conversely, the immediate impacts of a sustained decrease in the difference between monetary growth and economic growth are higher interest rates and a temporary recession. But the long-run impacts are lower inflation and lower interest rates.

As evidence for these relationships, consider Figure 1, which shows movements in monetary base growth (the Fed's policy variable) and short-term interest rates (3 month T-bill rate). From 1973 to mid 1975 the Fed followed a disinflationary policy by trending monetary growth downward. Initially (early 1973) interest rates rose but later (through 1975) fell. From mid 1975 to early 1978 the Fed followed a steady inflationary policy. Initially (mid 1976 - mid 1977) interest rates fell but thereafter steadily rose. In both mid 1978 - mid 1979 and early 1980 the Fed followed short-lived disinflationary policies. In both periods interest rates initially rose and then fell. Finally, at the beginning of 1981 the Fed embarked on its most dramatic and consistent disinflationary policy of the past decade. Again, interest rates initially rose to new heights in early 1981 (thereby

FIGURE 1. Monetary Growth and Interest Rates



creating the 1981-82 recession) but since mid-1981 have fallen.

Therefore, as a working model the consumer can use the scheme illustrated in Figure 2. In general, the economy grows at a 2 to 5 percent real (after inflation) rate each year. If the consumer notices a sustained acceleration of monetary growth (specifically, monetary base) above this range, then expect immediate prosperity but long-run inflation and higher interest rates. On the other hand, if the consumer notices a sustained deceleration of monetary growth to a point closer to the 2 - 5 percent range, then prepare for an immediate recession but expect long-run declines in inflation and interest rates.

FIGURE 2. A Model for Understanding the Erratic Economy

Policy Change	Short-run impact (0-12 months)	Long-run impact (post 12 months)
Fed accelerates monetary growth above 2-5% annual rate range	Lower interest rates, "boom"	Higher inflation rates Higher interest rates
Fed decelerates monetary growth to point closer to 2-5% annual rate range	Higher interest rates, recession	Lower inflation Lower interest rates

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A COMPARISON OF FOOD EXPENDITURES BETWEEN VEGETARIANS AND NONVEGETARIANS[1]

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Abstract

Although vegetarians perceived that they spent less money for food than nonvegetarians, no differences existed in weekly expenditures for total food or for groceries between 82 vegetarians and 82 nonvegetarians matched for age and sex. Savings from avoidance of expensive meat products by vegetarians were offset by their increased spending for vegetables, fruits and other protein sources.

INTRODUCTION

Resource limitations or economic conditions have been cited as a primary reason for the prevalence of vegetarianism in developing countries and among low-income consumers (13, p. 62-63). In recent years, concern for improved health and physical well-being, philosophical and ecological issues and the growth of non-traditional religions have generally been regarded as the reasons underlying the increasing interest in vegetarianism among young people (5, p. 529; 6, p. 503). Although the role economics plays in the adoption of vegetarianism has received little empirical attention, the general view seems to be that it is more economical to consume a vegetarian as opposed to a traditional meat-and-potato diet. In a 1978 nationwide poll of a representative sample of Americans, economy was seen to be the second most important reason for becoming a vegetarian after improved health (14).

Whether vegetarian consumers, especially the "new" youthful ones, are actually spending less for food than their nonvegetarian counterparts is the focus of this research. The primary objectives of the study were to compare the weekly food expenditures of vegetarians with those of a control group of nonvegetarians and to test the hypothesis that there would be no difference in the mean amount spent per week for food among the two groups. It was anticipated that the absence of relatively expensive meat products in the market basket of vegetarians would be offset by spending for foods in other categories such as fruits, vegetables and other non-animal protein sources. A third objective was to determine if those vegetarians who reported economic reasons for their choice of diet actually spent less than those who did not mention economics as a reason for being a vegetarian.

RESEARCH METHODOLOGY

The subjects visited the university on two occasions. On the first visit, a general questionnaire was administered which included questions regarding demographics, general health, perceptions of food expenditures and motivations for becoming a vegetarian. Additionally, instructions for recording all foods purchased during a one-week period on a market basket survey form were given. On the second visit, the subjects turned in completed market basket forms which were checked for completeness by a trained nutritionist and received a renumeration fee for their participation.

Subjects

Subjects were recruited via advertisements in campus and local newspapers, posters around campus and personal contact. Selection was limited to those who were between 18 and 41 years of age, nonpregnant and in relatively good health. Each of the 82 vegetarians were matched one-for-one with a nonvegetarian for age (± 2 years) and sex. Only one person from a specific household was included in the study to maintain independence in the data analysis. Vegetarian status was defined as avoidance of all meat and poultry products for a minimum of four months. The mean length of time the subjects had practiced vegetarianism was 5.5 years and ranged from 4 months to 37 years. The majority of the vegetarian subjects (62 percent) were categorized as lacto-ovo-vegetarians since they abstained from all meats, fish and poultry but ate dairy and egg products. Approximately one-fifth (21 percent) were lacto-vegetarians who consumed dairy but not egg products, and one-tenth (10 percent) were pesco-vegetarians who ate fish infrequently (<1 time/month). The remaining subjects (7 percent) were vegans who practiced a restrictive form of vegetarianism in which all animal protein sources are eliminated from their diet.

The mean ages of the vegetarians and nonvegetarians were 25.4 years and 26.1 years, respectively. Both groups were comprised of 62 percent females and 38 percent males. No significant differences existed between vegetarians and nonvegetarians in terms of their race, household size, marital status and educational level. The major differences ($p < .05$) in sample characteristics were in religion, university enrollment and current living arrangements. More vegetarians than nonvegetarians belonged to non-traditional religious categories (30 vs. 10 percent, respectively) or claimed no religious affiliation or to be an agnostic or atheist (38 vs. 32 percent, respectively). A large proportion of subjects in both groups were students; however, there were more nonstudents among the vegetarians (42 percent) than among the nonvegetarians (28 percent). Living arrangements between the groups differed with more vegetarians than nonvegetarians living in apartments or duplexes (62 and 50 percent, respectively) and in cooperatives (7 and 0 percent, respectively). No differences existed, however, in ownership of living quarters.

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While median incomes were relatively low among the subjects, these figures were somewhat higher among vegetarians than nonvegetarians -- $4988 and $4580, respectively. Household income reflected the same general relationship with the respective medians being $5910 and $5200. Although there was variance in the income data, the Mann-Whitney U test indicated no significant differences in the distribution of both personal and household income.

Instrument

A two-part market basket survey instrument was developed for the subjects to use in recording their food purchases during a one-week period. Form A was used for food purchased for home preparation and included information regarding the age and sex of all persons in the household served by the food. Purchase information included the store, size and/or amount, number of units, unit price and total cost for each entry. Form B was used for foods consumed away from home. Subjects were asked to record the prices of food items they purchased at such places as restaurants, cafeterias, fast food establishments and vending machines. In this case, only the subject's away-from-home food purchases were requested and not those of the entire household. In the few cases where food costs were included for a group of people, such as for pizza, manual adjustments were made to factor out the subject's share of the cost based on number and age of those served. Food purchases were verified by having the subjects turn in receipts for their purchases along with the completed market basket form.

Preparation of Data for Analysis

Foods recorded on the market basket forms were divided into general categories by a computerized program developed at the University of Texas. The general categories are listed in Table 1. The category of extended animal protein included preparations such as spaghetti and meatballs and macaroni and cheese. Extended plant protein included various combinations of plant proteins such as rice and beans or legumes and grains. The category of sandwiches/short orders included foods which contain items from more than one category. For example, a hamburger could be listed within red meat, bread or grains, and possibly vegetables (lettuce, onion) or fruits (tomato). A miscellaneous category provided for a variety of items such as spices, sauces, condiments and leavening agents. Alcoholic beverages were included in the beverage category whereas fluid milk was included as a dairy product. Non-food purchases such as detergents and paper towels were excluded from the analysis.

Spending for grocery purchases among the various food categories were listed individually on the market basket forms. Expenditures for foods eaten away from home were more difficult to evaluate since some meals were priced on a unit basis. In these cases, the cost was assigned to the first food item listed which was usually the entree.

Several adjustments in the data were necessary because of price changes which occurred during the eight-month study period and the impossibility of restricting the sample to households of a similar size and composition. First, each individual food price was adjusted using the appropriate percentage change in Consumer Price Index values for that food category from the month of purchase to December 1979 (2, pp. 90-91; 3, pp. 86-87). This adjustment enabled all food prices to be based on the same time period and on comparable price levels. Second, it was necessary to adjust the grocery data for differences in household composition since the grocery purchases were made for a household rather than for just the subject. To determine only the subject's share of the household grocery expenditures, an energy scale based on the Recommended Daily Allowances of food energy or calories for various age and gender categories was utilized (7). The third adjustment was necessary due to economies of scale since it is less expensive per person to purchase food for a larger household than for a smaller household (10, p. 2). Factors utilized by the U.S. Department of Agriculture to compensate for varying household sizes were applied to these data.

It was impossible to adjust for availability of different foods, especially fresh produce, during the study period. Since the nonvegetarian matches were chosen after their vegetarian counterparts, the nonvegetarian data were collected approximately one month later on average than the vegetarian data. However, since data analysis was restricted to broad food categories, it was assumed that substitution of various types of fruits and vegetables and processed forms for fresh ones would occur.

Statistical Analysis

All data were analyzed by a computerized statistical package, SPSS (12, pp. 267-270 and 223-224). Significant differences between continuous variables such as food expenditures were determined by student's t-tests. Chi squares were computed on all frequency data such as household size and living arrangements. The Mann Whitney-U test was utilized to test for differences in the distribution of incomes between the groups.

RESULTS AND DISCUSSION

Weekly Expenditures

The data presented in Table 1 represent the subject's share of food expenses which have been adjusted for household composition, economies of scale and price changes. Total weekly food expenditures were not significantly different, averaging \$19.80 for the vegetarians and \$21.01 for the nonvegetarians. There was even less of a difference in spending for groceries between the two groups with the vegetarians and nonvegetarians averaging \$15.53 and \$14.64 per week, respectively. The only significant difference between the two groups in overall expenditures was for foods eaten away from home where nonvegetarians spent \$6.37 while vegetarians spent \$4.27 ($p < .05$).

With regard to total spending for specific food categories, vegetarians spent significantly more than nonvegetarians on legumes, nuts, vegetables and fruit. Nonvegetarians spent more money than vegetarians on red meat, poultry, extended animal protein and sandwiches/short orders. Spending was highest among nonvegetarians for dairy products (\$3.20) followed closely by beverages (\$3.06) which was the highest expenditure category for the vegetarians (\$3.02). Vegetarians

TABLE 1. Comparison of Mean Weekly Expenditures[1] for Total Food, Food Prepared at Home, and Food Eaten Away From Home among Vegetarians and Nonvegetarians.

	Total food		Food prepared at home		Food eaten away from home	
Food Category	Vegetarians N=82	Nonvegetarians N=82	Vegetarians N=82	Nonvegetarians N=82	Vegetarians N=82	Nonvegetarians N=82
Red meat	\$ .10	\$ 2.60***	\$ .10	\$ 1.80***	\$ .00	\$ .80**
Poultry	.01	.59***	.01	.45***	.00	.14*
Fish	.22	.55	.05	.54***	.17	.02
Extended animal protein	.01	.56***	.01	.23***	.00	.33*
Legumes	.80	.31***	.72	.30**	.08	.00
Nuts	.42	.13**	.41	.13**	.01	.00
Seeds	.09	.02	.09	.02	.00	.00
Grains	.88	.72	.80	.69	.08	.03
Extended plant protein	.73	.50	.27	.03**	.46	.47
Dairy	2.73	3.20	2.53	2.96	.20	.25
Eggs	.48	.76	.26	.34	.22	.42
Vegetables	2.96	1.25***	2.73	1.06***	.22	.19
Fruit	2.64	1.36**	2.62	1.30**	.02	.06
Fats	.55	.39	.55	.39	.00	.00
Baked products	.92	1.10	.72	.87	.20	.23
Desserts	.04	.02	.00	.02	.03	.01
Beverages	3.02	3.06	2.24	2.13	.78	.93
Sugars	.39	.36	.39	.31	.00	.05
Soups	.16	.20	.05	.18*	.12	.02
Salads	.74	.56	.12	.17	.62	.39
Sandwiches/ short order	1.12	2.19*	.05	.16	1.07	2.03*
Miscellaneous	.79	.60	.79	.60	.00	.00
Total	\$19.80	\$21.01	\$15.53	\$14.64	\$4.27	\$6.37*

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[1] Subject's share of expenditures was calculated after data were adjusted for household composition, economies of scale and price changes during the interview period. Columns do not necessarily add to the exact figure indicated due to rounding.

* Significant difference between the two groups at the .05 level.

** Significant difference between the two groups at the .01 level.

*** Significant difference between the two groups at the .001 level.

spent more on both vegetables ($2.96) and fruits ($2.64) than nonvegetarians spent on red meat ($2.60). Thus, these findings support the hypothesis that there would be no difference in the total food expenditures of the two groups and that spending for the other food categories by vegetarians would offset the relatively high expense of meat products.

Differences between the two groups in their spending for groceries were similar to those observed in their total food expenditures. In addition, significantly more was spent by the nonvegetarians than the vegetarians for fish and soups for home preparation. The reverse was true for extended plant protein where vegetarians spent nine times the amount reported by nonvegetarians. The categories receiving the largest average expenditure for groceries were vegetables ($2.73) for the vegetarians and dairy products ($2.96) for the nonvegetarians.

Although the total amount spent for food away from home differed significantly between the two groups, there were fewer differences in the expenditures for the various food categories. Differences were again observed in the red meat, poultry and extended animal protein categories, but the relationships were weaker than they had been for expenditure of groceries and total food. The category receiving the greatest expenditure for food away from home for both vegetarians and nonvegetarians was sandwiches/short orders. Nonvegetarians reported almost twice as much money spent on this food category as vegetarians -- $2.03 and $1.07, respectively.

It is difficult to compare the data presented here to previous studies since 1) no other reports of food expenditures of vegetarians exist and 2) the data were collected in 1979. The most comprehensive, recent report of food consumption expenditures is the 1977 Nationwide Food Consumption Survey conducted by the U.S. Department of Agriculture (8). When the 1977 values of the survey are updated by appropriate Consumer Price Indices to December 1979 values, it is interesting to note how similar the data are even though the studies do not measure exactly the same variables. (The current study reports the amount spent during a week while the nationwide data reports the money value per household member of food used during a week.) Updated survey data for the $5,000-9,999 income category, which is comparable to the present study, indicate that the average amount used for total food would be $21.55; this amount is only slightly higher than the $19.80 and $21.01 spent by vegetarians and nonvegetarians, respectively. The price-adjusted amounts used nationwide would be $17.00 for in-home consumption and $4.87 for food eaten out in 1979. The in-home figure is somewhat higher and the food eaten away-from-home figure is somewhat lower than comparable amounts spent by the subjects in this study. The percentage of expenditures accounted for by food eaten out averaged 26 percent in the present study; this is similar to the 24 percent reported in the nationwide survey. The two-year time differential and the young, student-oriented sample could easily account for this small difference.

Expenditures by Gender

Considerable similarity existed in the spending of vegetarians and nonvegetarians when comparisons were made by gender as reported in Table 2. The significant difference in overall spending for foods eaten away from home was attributable to differences between male vegetarians and nonvegetarians. The former spent less than half as much as the latter on foods eaten away from home. In fact, the male vegetarians spent less than the female vegetarians on food away from home which countered the normal trend where males generally outspent their female counterparts. Analysis of the food expenditures of males indicated that vegetarians spent less than nonvegetarians for both groceries and foods eaten out. For the females, however, vegetarians spent more for groceries and less for foods eaten out than nonvegetarians. Except for the basic difference in spending on food eaten away from home between all vegetarians and nonvegetarians and male vegetarians and nonvegetarians, these differences were not statistically significant.

Although the methodology varies somewhat, benchmarks for comparing the weekly cost of groceries for males and females are also available from the

TABLE 2. Comparison of Mean Weekly Expenditures for Total Food, Food Prepared at Home, and Food Eaten Away From Home among Male and Female Vegetarians and Nonvegetarians.

	Total food		Food prepared at home		Food eaten away from home	
Subjects	Vegetarians	Nonvegetarians	Vegetarians	Nonvegetarians	Vegetarians	Nonvegetarians
Total (N=164)	$19.80	$21.01	$15.53	$14.64	$4.27	$6.37*
Male (N=62)	20.46	26.81	16.99	18.92	3.48	7.95*
Female (N=102)	19.40	17.47	14.64	12.04	4.76	5.44

*Significant difference between the two groups at the .05 level.

U.S. Department of Agriculture. In December 1979, the estimated cost for one week on the thrifty and low-cost food plans for males 20-54 years of age was $14.50 and $19.00, respectively (4, p. 42). The average expenditure for the vegetarian males in this study was $16.99 which fell about midway between these two plans. The $18.92 expenditure for the nonvegetarian males was very close to the amount of the low-cost food plan. For females between 20-54 years of age, the estimated weekly cost for the two food plans were $11.90 and $15.50 in December 1979 (4, p. 42). Since female vegetarians and nonvegetarians in this study averaged $14.64 and $12.04, respectively, per week for groceries, these amounts also fell between those estimated for the thrifty and low-cost plans.

Spending Perceptions

When asked "Do you think you spend more or less of your income on food as a vegetarian than you would as a nonvegetarian?," the majority (61 percent) of the vegetarians thought that they spent less. This group of vegetarians estimated they saved on average $10.59 per week by following their restrictive dietary pattern. One-tenth of the vegetarians thought they spent more than the nonvegetarians, while approximately three-tenths believed they spent about the same amount. Only one-third of the nonvegetarians, when asked a similar question, "Do you think you would spend more or less...as a vegetarian....?," responded that they would spend less. The majority (51 percent) felt they would spend about the same amount as they did as nonvegetarians, whereas the remaining 16 percent felt they would spend more. The differences in the scaled response patterns to these questions by the two groups were significantly different (p=.001). Thus, although their expenditures did not prove to be lower in actuality, it is apparent that vegetarians generally perceived that they spent less than nonvegetarians for food.

When asked to list their reasons for becoming a vegetarian, almost one-fourth (23 percent) of the vegetarians listed economics as a reason. The mean weekly amount spent for food by this economically-motivated group of vegetarians was about $3 less than that for the vegetarians who gave no economic reasons, $13.26 vs. $16.21, respectively. Since this difference was not statistically significant, it cannot be substantiated that being economically motivated to become a vegetarian results in a measurable difference in food expenditures.

CONCLUSIONS AND IMPLICATIONS

Although vegetarians perceived they spent less money for food than nonvegetarians, this was not the case as indicated by comparisons of the actual expenditure data. No significant differences existed in expenditures for total food or groceries between the two groups. Savings from the avoidance of expensive meat products by the vegetarians were offset by increased spending for vegetables, fruits and other non-animal protein sources. Even the food expenditures of vegetarians who listed economics as a reason for the adoption of their dietary pattern were not significantly lower than those who gave only noneconomic reasons. The only major difference in overall spending between vegetarians and nonvegetarians was that the nonvegetarians spent more for foods eaten away from home. This difference was largely due to the male nonvegetarians whose expenditures for foods eaten out were twice those of their vegetarian counterparts.

The findings from this study indicate that economic factors are of lesser importance in the adoption of vegetarianism than generally perceived. The majority of vegetarians in this study believed they were spending less for food than they would as nonvegetarians. Since the comparisons of actual food expenditures contradicted this widely-held perception, it may well be that economic justifications for such dietary choices is more akin to a rationale than a true reason or motivation for the behavior. That meats are high priced and consume a major share of the normal food dollar are factors which might contribute to the perception that omission of such products from the diet should result in lower food expenditures. This reasoning could occur without further thought regarding the relative expense of fresh fruits and vegetables and other protein sources such as dairy products, nuts and seeds.

Previous literature has indicated that health and nutritional concerns are becoming more influential in food choice and resulting in changing food consumption patterns (11, p. 29; 15, p. 21). In fact, a 1979 survey by the U.S. Department of Agriculture's Economics and Statistical Service indicated that almost two-thirds of the American consumers surveyed had made dietary changes during the previous three years for health and nutrition reasons (9, p. 16). Dwyer et al. has reported that "new" vegetarians are sensitive to health issues and give health-related reasons more frequently than other reasons for their dietary patterns (5, pp. 530-531). Food purchases made for health reasons may actually contribute to higher food expenditures. For example, Brown and Bergan reported that vegetarians purchased foods at natural food outlets or direct from farmers even though they realized the products were more expensive from these sources than from supermarkets (1, p. 456). Patronage of such non-traditional establishments could contribute to the lack of savings observed among vegetarians. It is possible that vegetarians are more concerned about freshness and quality of their purchases and, therefore, shop with greater frequency that their nonvegetarian counterparts. A pattern of more frequent shopping might also influence total food cost. In addition, the products purchased by vegetarians may lack preservatives and additives, which contribute to shorter shelf life, greater spoilage and waste and higher cost. Further research is needed to determine if differing purchase patterns contribute to the lack of measurable savings in the food expenditures of vegetarians when compared to nonvegetarians.

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A RATIONAL EXPLANATION FOR DECLINING BEEF CONSUMPTION

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ABSTRACT

Since 1976, per capita beef consumption has decreased by nearly 20 percent. Consumer surveys indicate that consumers perceive economic factors as the principal determinants of their changed consumption patterns. Economic and statistical analyses of time series data covering the 1960-80 period confirm that economic factors do, indeed, explain the changes in per capita consumption.

NATURE OF THE PROBLEM

Between 1976 and 1980, per capita beef consumption declined from 94.4 pounds to 76.5 pounds - a decrease of 19 percent. From the beef industry's perspective, consumer demand has been somewhat capricious and has resulted in depressed producer prices and a consequent decline in income. In a more analytical vein, decline has been attributed to a growing concern with the cholesterol content of red meats and their potential health effects - a perception which informed the grade change petitions of the National Cattlemen's Association and the Iowa Cattlemen's Association in 1981. Consumer response to those proposals led U.S.D.A. to decide in favor of retaining the status quo. The producer associations saw the proposal as favoring the production of leaner meat. Consumers, on the other hand, expressed misgivings as to their potential economic effects. Table 1 charts changes in per capita consumption between 1960 and 1980.

TABLE 1. Per Capita Beef Consumption, 1960-80

Year	Lbs.	Year	Lbs.
1960	64.2	1971	83.4
61	65.8	72	85.5
62	66.2	73	80.5
63	69.9	74	85.6
64	73.9	75	87.9
65	73.6	76	94.4
66	77.0	77	91.8
67	78.8	78	87.2
68	81.2	79	78.1
69	82.0	80	76.5
70	84.1		

Source: U.S.D.A., Food Consumption, Prices and Expenditures, 1960-80, Washington, D.C., September 1981, Table 4, p. 6.

What is needed, from an analytical perspective, is a reasonable, rational explanation for the perceptible change in beef consumption patterns. This paper is an attempt to provide such an analysis.

METHODOLOGY AND HYPOTHESIS

There are basically two methodological approaches to analyzing the pattern of causation in the decline in beef consumption. Consumer surveys can provide timely, cross-sectional information as to consumer sentiments, preferences, concerns and perceived constraints. Alternatively, or additionally, the use of time series data in econometric analysis may indicate the relative significance of various economic factors in accounting for changes in consumption.

Cross section data is provided in a nationwide consumer survey conducted for the American Meat Institute by the firm of Yankelovitch, Skelly and White in 1981 (1). The results of the survey, covering 1,019 households, are instructive of how the respondents perceived various influences and constraints on their consumption decisions. Time series data are from U.S.D.A.'s Food Consumption, Prices and Expenditures, 1960-80 (2).

Survey Results

The survey results, as expected, indicate, strong economic motivations to change purchasing behavior and consumption patterns. Fifty-three percent of the respondents economized on food purchases as a means of reducing their living expenses. Fully a third - 33 percent - reported serving less fresh meat than during the previous year. Only 10 percent indicated they were serving more (1, 71). Table 2 shows the principal reasons identified by respondents for changing meat consumption patterns.

While the multiple responses are not additive, they suggest that approximately 80 percent of the households are responding primarily to economic factors in reducing their meat consumption. For heavy users of fresh meat, those serving fresh meat more than 14 times in a two-week period, cost was viewed as a constraint by 89 percent of the respondents. Among moderate users, serving meat nine times during a two week period, 80 percent saw cost as their principal constraint. Among light users, those who serve fresh meat six times or less per two-week period, health, demographic and food preferences were more significant. Nonetheless, 62 percent perceived meat as being too expensive. Interestingly, vegetarian dietary habits and changes in tastes and preferences were of relatively minor significance, accounting for 3 percent and 4 percent, respectively. Nine percent reported serious health concerns affecting their meat consumption patterns. Clearly, the data do not support the notion that the decline in beef and meat consumption since 1976 can be attributed to health and dietary concerns.

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TABLE 2. Reasons Serving Less Fresh Meat Than One Year Ago

(Unaided)

	Primary Food Shoppers	Fresh Meat Frequency		
		Heavy	Moderate	Light
(Percentage in Population)	(100)	(30)	(34)	(36)
	%	%	%	%
Total	100*	100	100	100
Cost/too expensive	73	89	80	62
Health reasons: e.g., high blood pressure	9	5	10	10
Change in household size	8	6	4	12
Prefer other food	8	5	7	10
Trying to save money	5	8	5	5
Eating out more	4	2	4	5
Change in tastes	4	3	4	4
Vegetarians	3	-	-	7
Poultry less expensive	3	3	5	3
Other	12	5	9	17

* Multiple responses.

Source: American Meat Institute, Consumer Climate Barometer Relevant to Meat Products, Washington, D.C., May, 1981, p. 89.

Analysis of Time Series Data

Consumer demand theory recognizes several determinants of consumer demand: tastes and preferences, consumer incomes, the price of the product and the relative prices of substitutes. While the practical utility of much of neoclassical economic theory is open to question, there is no denying that consumers do, in fact, behave generally in accordance with the paradigms of consumer demand theory--increasing amounts purchased when prices decrease and (ceteris paribus) decreasing quantities consumed when prices increase. If demand is inelastic, a price increase may not necessarily lead to reduced consumption. And when prices and incomes are increasing pari passu, a price increase may not significantly affect consumption, since real incomes may not be materially affected. Thus, the potential effect of a price increase may be masked. If real incomes decline, however, a price increase may elicit a negative consumption response. It is instructive therefore to examine the behavior of some key economic variables in the period under consideration. Use of time series data on consumer incomes, the prices of beef and its close subntitutes may refute or corroborate the conclusion suggested by the consumer survey data.

Consumer Incomes

Aggregate income, in 1972 dollars, went from $1,122.4 billions in 1970 to $1,480.7 billions in 1980--a 32 percent increase. Personal income increased similarly from $869.1 billions to $1209.0 billions over the period. However, when we examine another indicator of potential purchasing power, average real spendable weekly earnings, a different pattern emerges. Real spendable weekly earnings peaked in 1972 at $97.11 and declined fairly consistently to $83.56 in 1980 --a decrease of 14 percent. In the critical period, 1976-1980, average real spendable earnings went from $91.42 to $83.56--a nine percent drop (3). Examination of changes in per capita beef consumption, along with changes in average real weekly spendable earnings are closely related.

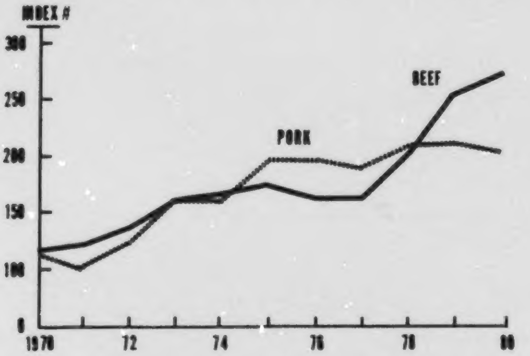
The relationship between average real weekly spendable earnings and per capita beef consumption is graphically apparent (See Figure 2).

Prices

Consumer demand responds to changes in the price of the product, as well as to changes in the relative prices of substitutes. Examination of the behavior of the beef price index suggests that changes in beef prices may be partially responsible for the changes in consumer demand. Between 1960 and 1970, the beef price index went from 92.3 to 119.5--an increase of 27.2 points or approximately 29 percent. During this period per capita beef consumption increased by 31 percent, nearly a third. By contrast, between 1970 and 1980, the index went from 119.5 to 270.3--an increase of 150.8 points or approximately 126 percent. Beef price increases, alone, during the nineteen-seventies would have had some negative impact on demand. But the more rapid rate of increase of the beef price index, compared to that of its close substitutes, would have magnified the impact.

Whereas the real prices of beef, pork and chicken were comparable in 1973, expressed in 1967 dollars, subsequent price relationships may explain changes in consumer demand patterns. Between 1974 and about 1977, the real price of pork was higher than that for beef. Not surprisingly, per capita beef consumption increased from 80.5 pounds in 1973 to 94.4 pounds in 1976 and declined only marginally to 91.8 pounds in 1977. Pork consumption decreased from 78.7 pounds in 1971 to only 50.6 pounds in 1975. By 1976 it was still only 55.8 pounds--a decrease of 29 percent. As illustrated in Figure 1, beef prices began to increase at a noticeable rate in 1977, and by 1980 the beef price index was 61 points higher then the pork price index (1967=100). Figure 1 traces the relative movements of the beef and pork price indexes.

FIGURE 1. Beef & Pork Price Indices (1967=100)



Chicken can be considered a reasonable, if not close, substitute for beef. Thus, the movements of relative prices between beef and chicken may indicate possible economic motivations for changes in consumption patterns.

As indicated, the real prices of beef and chicken bore the same relationship to each other in 1973 as in 1967. Divergence between the beef price index and the chicken price index was not great between 1973 and 1977. In fact, they nearly converged again in 1977. Subsequently, however, the beef price index increased at a fairly steep climb; by 1980 reaching 270.3 compared with 190.8 for chicken (1967=100)--a gap of 79.5 points. Between 1975 and 1980 the price index for chicken increased by 17.5 percent. The index for beef increased by 59 percent.

Our basic hypothesis is that the changes in beef consumption patterns between 1960 and 1980 can be explained by changes in the levels and rates of change of economic variables.

STATISTICAL ANALYSIS AND RESULTS

The objective of the statistical analysis is to ascertain whether using a specified set of economic variables in simple and multiple regression equations, we can adequately explain variations in per capita beef consumption.

Equations take the basic form

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \; ..... \; +e.$$

The goodness of fit is indicated by the coefficient of determination for the regression equation. The reliability of the α and b coefficients depend on the size of the Durbin-Watson statistic for which low values suggest the presence of positive serial correlation in the errors. The F statistic evaluates the statistical reliability of the regression coefficient of determination.

In the following set of equations the arithmetic values of the variables are used. The set of independent variables are:

X_1 = per capita beef consumption

X_3 = average real spendable weekly earnings of workers on private payrolls (income)

X_4 = the price index of beef

X_5 = the price index of pork

X_6 = the price index of chicken

X_7 = ratio of beef price index to pork price index

X_8 = the ratio of beef price index to chicken price index.

Results Using Arithmetic Values

$$X_1 = -61.2560 + 1.56398X_3 \quad (1)$$
$$(29.0389) \quad (0.322567)$$
$$R^2 = .5530 \quad \text{D-W} = .6832 \quad F = 25.5083$$

$$X_1 = 69.9903 + .06796X_4 \quad (2)$$
$$(4.7909) \quad (.32357)$$
$$R^2 = .1884 \quad \text{D-W} = .3601 \quad F = 4.41177$$

$$X_1 = -62.2945 + 1.48780X_3 + .056931X_4 \quad (3)$$
$$(25.0908) \quad (0.280072) \quad (.020850)$$
$$R^2 = .6839 \quad \text{D-W} = 1.0448 \quad F = 19.4758$$

$$X_1 = -31.9331 + 1.11762X_3 - .08812X_4 + 0.17131X_5$$
$$(21.5468) \quad (.244271) \quad (.04469) \quad (.04911) \quad (4)$$
$$R^2 = .8158 \quad \text{D-W} = 1.4682 \quad F = 25.0954$$

$$X_1 = 6.39563 + 0.856081X_3 -.02400X_4 + 0.34105X_5$$
$$(26.0542) \quad (0.250167) \quad (0.04968) \quad (0.08868)$$
$$-0.365387X_6 \quad (5)$$
$$(0.16535)$$
$$R^2 = .8589 \quad \text{D-W} = 1.5622 \quad F = 24.3410$$

$$X_1 = -23.4507 + 1.3507X_3 -17.9226X_7 \quad (6)$$
$$(37.4429) \quad (0.3417) \quad (11.7454)$$
$$R^2 = .6042 \quad \text{D-W} = .6998 \quad F = 13.7402$$

$$X_1 = -66.3857 + 1.4414X_3 + 15.1996X_8 \tag{7}$$
$$(27.4439) \quad (0.310334) \quad (8.13863)$$
$$R^2 = .6256 \quad D\text{-}W = .8303 \quad F = 15.0372$$

$$X_1 = 86.7237 \; -.08735X_4 \; -70.0595X_7 + 73.023X_8 \tag{8}$$
$$(9.76726) \quad (.039615) \quad (9.46014) \quad (15.1454)$$
$$R^2 = .8094 \quad D\text{-}W = 1.7467 \quad F = 24.0709$$

$$X_1 = 21.8893 + 0.7616X_3 \; -44.7674X_7 + 33.4398X_8 \tag{9}$$
$$(26.0723) \quad (0.2521) \quad (9.3524) \quad (6.6627)$$
$$R^2 = .8405 \quad D\text{-}W = 1.5340 \quad F = 29.8662$$

Equation 1, using income alone as an explanatory variable, has an R^2 of .55. The D-W statistic is below the critical d_L value. Although the coefficient of X_3 is significant at the .99 level, the standard error of α is large. The F statistic is not significant at the 5% level. Equation 2 uses the price of beef, alone, as the independent variable. The inadequacy of this regression in accounting for variations in per capita beef consumption is demonstrated by the low R^2, the size of the D-W statistic and the very low F value. When, as in Equation 3, both income and the beef price index are used in the regression, the coefficient of determination increases measurably to .6839; but the D-W and F values remain low. Equation 4 makes beef consumption a function of income (earnings), the price index of beef, the price index of pork and the price index of chicken. Again, the R^2 increases substantially to .8158, the D-W statistic increases to 1.4682 and the F value is higher, at 25.0954. The standard error of the constant term, however, is quite large; and the D-W statistic is inconclusive with respect to autocorrelation. Equation 6 uses income and the price index ratio for beef and pork; while Equation 7 uses income and the price index ratio for beef and chicken. Coefficients of determination are lower; and the D-W statistic indicates the presence of positive serial correlation. Equation 8 shows marked improvement. The standard errors are relatively small; the $R^2 = .8094$; D-W shows no serial correlation; and the coefficient of determination of the regression equation is significant at the 5% level but not at the 1% level. Equation 9 shows a higher R^2 but a lower D-W.

The equations above, using the arithmetic values of a logical a priori set of economic variables, vary in their statistical integrity. Some yield high R^2 values, but most have high standard errors and low D-W values, indicating the presence of serial correlation. Logarithmic transformations of the arithmetic values produce some improvement in the following equations:

Results Using Logarithmic Transformations of Arithmetic Data

$$LX_1 = -3.91807 + 1.84235LX_3 \tag{10}$$
$$(1.59626) \quad (0.354849)$$
$$R^2 = .5866 \quad D\text{-}W = .6966 \quad F = 26.9560$$

$$LX_1 = 3.52242 + 0.173862LX_4 \tag{11}$$
$$(0.287525) \quad (0.0588935)$$
$$R^2 = .3145 \quad D\text{-}W = .3870 \quad F = 8.71514$$

$$LX_1 = -3.55515 + 1.62350LX_3 + 0.127610LX_4 \tag{12}$$
$$(1.28564) \quad (0.292030) \quad (.037639)$$
$$R^2 = .7477 \quad D\text{-}W = 1.1390 \quad F = 26.6697$$

$$LX_1 = -2.13590 + 1.29597LX_3 \; -0.156514LX_4 \tag{13}$$
$$(1.20889) \quad (0.275379) \quad (0.106942)$$
$$+ 0.297197LX_5$$
$$(0.106706)$$
$$R^2 = .8267 \quad D\text{-}W = 1.4549 \quad F = 27.0402$$

$$LX_1 = 0.243863 + 0.915594LX_3 \; -0.535487LX_7 \tag{14}$$
$$(1.16892) \quad (0.259887) \quad (0.105931)$$
$$+ 0.467390LX_8$$
$$(.083434)$$
$$R^2 = .8718 \quad D\text{-}W = 1.5672 \quad F = 38.5186$$

$$LX_1 = 5.09648 \; -.0443512LX_4 + 0.882580LX_5 \tag{15}$$
$$(0.388468) \quad (0.121474) \quad (0.129333)$$
$$-0.992212LX_6$$
$$(0.221840)$$
$$R^2 = .8167 \quad D\text{-}W = 1.5639 \quad F = 25.2497$$

$$LX_1 = 0.243863 + 0.915594LX_3 \; -0.535487LX_7 \tag{16}$$
$$(1.16892) \quad (0.259887) \quad (0.105931)$$
$$+ 0.467390$$
$$(.083434)$$
$$R^2 = .8718 \quad D\text{-}W = 1.5672 \quad F = 38.5186$$

$$LX_1 = 4.36187 \; -0.741372LX_7 + 0.606786LX_8 \tag{17}$$
$$(.0112939) \quad (0.112939) \quad (.093897)$$
$$R^2 = .7781 \quad D\text{-}W = .9692 \quad F = 31.5619$$

Equations 10, 11 and 17 show evidence of positive serial correlation in their low D-W values. Equations 10 and 11 which use income, alone, or the beef price index, alone, as independent variables have particularly low D-W values. The balance of the equations are inconclusive as to the presence of serial correlation, their D-W values falling in the range where $d_L < d < d_u$. Following a methodology proposed by Merrill and Fox (4,420) further transformations of the data were carried out to possibly reduce or eliminate the statistical problem of autocorrelation in the residuals of the equations. First differences is a suggested methodological alternative to achieve this end. Here, first differences of the logarithms are used so that the beta coefficients might be taken as the orders of magnitude of the elasticities of per capita beef consumption with respect to income and the beef price index. The results are given in Equations 18-23:

Equations Using First Differences of Logarithms

$$X_{10} = .008104 + .941594X_{11} \qquad (18)$$
$$(0.941594) \quad (.0106327)$$
$$R^2 = .9976 \quad D\text{-}W = 1.9869 \quad F = 7842.32$$

$$X_{10} = .0192330 + 1.15258X_{11} - 0.208484X_{12} \qquad (19)$$
$$(.0111907) \quad (0.110168) \quad (0.108418)$$
$$R^2 = .9980 \quad D\text{-}W = 2.1012 \quad F = 4479.77$$

$$X_{10} = .0180497 + 1.12169X_{11} - 0.254396X_{12} + .0783X_{13}$$
$$(.01148) \quad (.12048) \quad (.12868) \quad (.1138)$$
$$R^2 = .9980 \quad D\text{-}W = 2.2027 \quad F = 2899.33 \qquad (20)$$

$$X_{10} = .0192006 + 1.15318X_{11} - 0.206614X_{12} \qquad (21)$$
$$(.0116820) \quad (0.119187) \quad (0.159404)$$
$$-.00237457X_{14}$$
$$(0.144558)$$
$$R^2 = .9980 \quad D\text{-}W \; 2.0959 \quad F = 2820.64$$

$$X_{10} = .0159290 + 1.12785X_{11} - 0.203987X_{12} \qquad (22)$$
$$(.0123582) \quad (0.123568) \quad (0.160608)$$
$$+ 0.127858X_{13} - 0.100823X_{14}$$
$$(0.147448) \quad (0.184658)$$
$$R^2 = .9981 \quad D\text{-}W = 2.0526 \quad F = 2084.80$$

$$X_{10} = .00702601 + .950223X_{11} - 0.192317X_{15} \qquad (23)$$
$$(.0110581) \quad (.0147881) \quad (0.145015)$$
$$+ .0971632X_{16}$$
$$(0.190492)$$
$$R^2 = .9978 \quad D\text{-}W = 2.1442 \quad F = 2610.92$$

In Equations 18-23 the symbols for the variables are as follows:

X_{10} = per capita beef consumption

X_{11} = income (earnings)

X_{12} = price index of beef

X_{13} = price index of pork

X_{14} = price index of chicken

X_{15} = ratio of beef price index to pork price index.

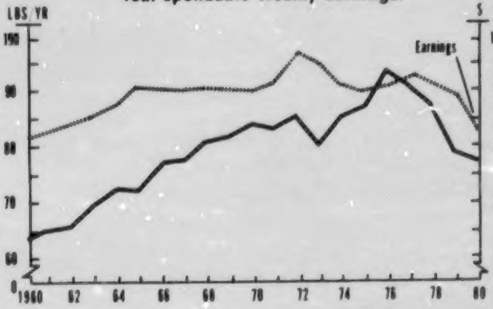
X_{16} = ratio of beef price index to chicken price index

Equations 18-23 are considerably improved, statistically, over those utilizing the simple arithmetic values of the variables or their simple logarithmic transformations. Also improved are the values of the regression coefficients of determination. Surprisingly, the simple regression of beef consumption on income explains over 99 percent of the variation in beef consumption. The regression coefficient is significant at the 1% level. The partial coefficient of X_{11} is significant at the 99% level.

In Equation 19 the R^2 increases marginally to .9980; the t tests for the earnings variable is significant at the 99% level; and the partial coefficient for the beef price index variable is significant at the 90% level. In Equation 20, the income coefficient is significant at the 99% level; the beef price index coefficient is significant at the 90% level; the pork price index coefficient is significant at the 50% level. Equation 21 utilizes the first difference of the logarithms of income, the beef price index and the chicken price index. The R^2 does not change; the D-W statistic is marginally reduced; the F value is significant at the 1% level; the coefficient of the constant is significant at the .75 level; the income coefficient is significant at the .99 level; and the partial coefficient for the beef price index is significant at the 75 percent level. The partial coefficient for the poultry price index is not significant.

Equation 19 is a reasonably good explanation of changes in per capita beef consumption between 1960 and 1980. The income coefficient is significant at the .99 level; the price index coefficient at the .90 level; the coefficient of determination is .9980; the D-W statistic rejects the null hypothesis of positive serial correlation; and the F value is significant at the 1% level. Figure 2 shows a graphic relationship between earnings and per capita beef consumption.

FIGURE 2. **Per capita beef consumption, average real spendable weekly earnings.**



CONCLUSIONS AND IMPLICATIONS

The analysis indicates that changes in per capita beef consumption between 1960 and 1980 can be explained by consumer response to economic factors, in particular, consumer purchasing power and beef prices. While the prices of pork and poultry were of some relevance to consumer decision making, they were not as significant as earnings and the price of beef. The cross section data suggests that health concerns and demographic factors have become more significant in recent years and are likely to increase in significance during the coming decade. Nonetheless, changes in meat and beef consumption will, in all likelihood, hinge on developments in the macro-economy. Most favorable to beef consumption would be a broad based economic recovery with high levels of employment and increased levels of real earnings and incomes. Our analysis suggests that beef consumption is highly sensitive to changes in real income. Monetary and fiscal policy will play a vital role on the demand, as well as, the supply side. To the extent that these policies can stimulate growth without high inflation and with relatively low interest rates, consumer demand and the cost of production may both be positively affected. A high level of unemployment, inflation and other factors that depress real consumer purchasing power will continue to depress the demand for beef. Producers and the marketing system will also need to pay much closer attention to economic efficiencies on the supply side.

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SOCIAL-PSYCHOLOGICAL FACTORS ASSOCIATED WITH CHANGE IN SUGAR-RELATED CONSUMPTION BEHAVIORS

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ABSTRACT

Relationships among demographic variables, beliefs, attitudes, and behaviors with respect to sugar-related consumption were postulated from the Fishbein behavioral model. Associations were tested using data from a national survey by USDA. Changes in consumption were consistent with behavioral beliefs and attitudes. Beliefs appeared to mediate between demographic characteristics and attitudes.

INTRODUCTION

In 1980 the United States Department of Agriculture sponsored a nationwide survey to collect data on food consumption patterns and dietary changes made for nutrition and health reasons. A reduction in sugar consumption was the most frequently mentioned change among the two-thirds of individuals who reported a change in diet for nutrition and health reasons within the preceding three years. Interestingly, however, statistics on aggregate consumption show a ten percent increase in U.S. per capita sugar consumption during the 1970s, much of which has been associated with increased use of products high in hidden sugars, such as processed foods and soft drinks [25].

Currently, an average American consumes about 130 pounds of refined sugar per year; this comprises about 18 percent of total energy intake [13]. National dietary guidelines contain the recommendation that level of sugar consumption comprises only about 10 to 15 percent of the total energy intake [27]. For attainment of this guideline, a reduction in the consumption of all types of sugars, candies, soft drinks, ice cream, cakes and cookies is suggested. An increase in fresh fruit, vegetable and bread consumption has been recommended to replace sugary foods in the diet.

Because dietary patterns are a complex product of cultural habits, psychological factors, situational variables, past experiences, personal characteristics, tastes and preferences, cost and availability, it has been difficult for practitioners to predict food choice behavior or to initiate changes in food consumption [2, 17, 18, 21, 24]. Numerous studies have assessed effects of nutrition knowledge and attitudes on practices, correlated demographic and personal characteristics with nutritional behaviors, and isolated potential sources of influence on food choice [2-6, 9, 10, 12, 14, 16, 19-22, 28, 29]. However, a model of food choice which accurately predicts behaviors has been lacking.

This paper presents results of research testing the usefulness of the Fishbein behavioral model [7, 8] in predicting sugar-related consumption behaviors. The objectives of this research were as follows:

1) To determine the association between beliefs regarding sugar-related consumption behavior, health, and nutrition and attitudes toward sugar-related consumption behaviors.

2) To determine the association between attitudes toward sugar-related consumption and sugar-related consumption behaviors.

3) To determine the association between demographic characteristics and beliefs regarding sugar-related consumption behavior, health, and nutrition.

4) To determine what sources of information influenced individuals to make changes in food consumption for health and nutrition reasons and if type or number of sources were related to sugar-related changes.

THEORETICAL BACKGROUND

Hochbaum's [11] health belief model, Lewin's [14] channel theory, and the ecological systems perspective theory presented by Sims and Wright [23] are three theories which have applicability to the problem of explaining food habits and dietary change. However, none of these offers what the Fishbein Behavioral Intention (FBI) model does, that is, postulates concerning the motivations underlying a given behavior [7, 8]. The FBI model, shown effective in predicting a variety of behavioral objectives, assumes a person's intention to perform a behavior is the immediate determinant of the action. (See Figure 1.) Intentions are influenced by attitudes and subjective norms, and attitudes and subjective norms are influenced by beliefs. According to the theory, individuals will intend to perform a behavior when they evaluate it positively and when they believe important others think they should perform it. Since beliefs are shaped by past experiences it can also be argued that demographic variables, personality traits, and attitudes which influence a person's interpretation of past experiences can also influence their beliefs. The theory also postulates an indirect link between demographic variables and behaviors via beliefs.

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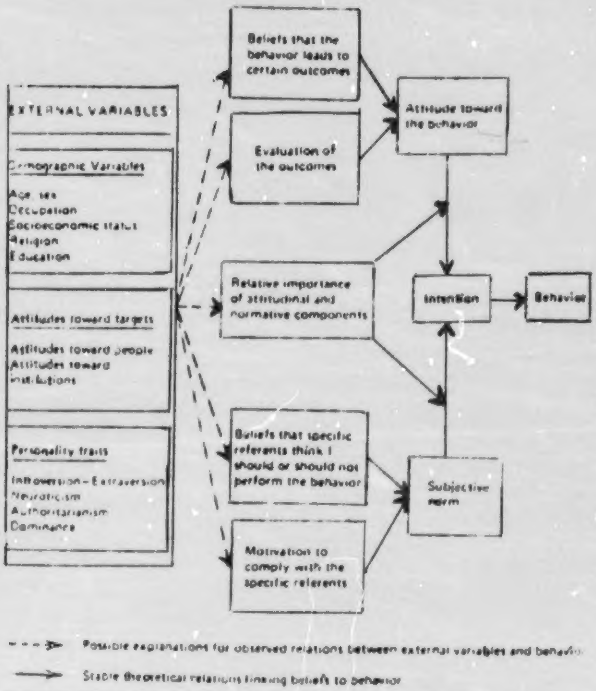
FIGURE 1. Behavioral Intention Model


EXTERNAL VARIABLES
Demographic Variables
Age, sex
Occupation
Socioeconomic status
Religion
Education
Attitudes toward targets
Attitudes toward people
Attitudes toward institutions
Personality traits
Introversion – Extraversion
Neuroticism
Authoritarianism
Dominance
Beliefs that the behavior leads to certain outcomes
Evaluation of the outcomes
Relative importance of attitudinal and normative components
Beliefs that specific referents think I should or should not perform the behavior
Motivation to comply with the specific referents
Attitude toward the behavior
Subjective norm
Intention
Behavior
Possible explanations for observed relations between external variables and behavior
Stable theoretical relations linking beliefs to behavior

METHODOLOGY

Data Description

The United States Department of Agriculture's Economic and Statistics Service 1980 survey of health and diet concerns was the source of data for this study [26]. The survey was conducted using a questionnaire-interview format and with households selected on the basis of a national probability sample; included in the sample were households residing in all four regions of the United States. Trained interviewers conducted a personal interview with the person primarily responsible for food preparation in the household. Efforts were made to find eligible respondents at home and to urge cooperation of those reluctant to participate.

A total of 2,200 households were selected in the national sample. However, 233 were excluded due to vacant housing units or reports of no food preparation in the households. Of the 1,997 households eligible for the survey, 68 percent (n=1,353) provided completed interviews.

Statistical Analysis

Chi square analysis [2] was used to test for association between the sets of variables. Crosstabs was the computer procedure used to make the computations [15]. The probability level at which results were considered significant was set at the 0.05 level.

Two-way crosstabulations were made for: (1) each belief with each attitude; (2) each attitude with each behavior; (3) each type of influence with each behavior; (4) the number of influences mentioned with each behavior; and (5) each demographic characteristic with each belief. Three-way crosstabulations were made for: (1) attitudes and behaviors, controlling for beliefs; and (2) demographic characteristics and attitudes, controlling for beliefs.

RESULTS

Sample Characteristics

Of the 1,353 respondents interviewed the majority were white women residing in urban settings. On the average, respondents were 44 years old, had finished high school, and had after-tax household income of about $18,000.

Tests of Hypotheses

Beliefs and Attitudes. Results of analyses for associations among beliefs and attitudes indicated the following associations were significant: (1) Those who believed just about everyone should eat less sweets and sugars also tended to have the attitudes that they should decrease sugary food consumption and decrease caloric intake. (2) Those who believed there is a connection between certain foods and some diseases also tended to have the attitude that they should decrease sugary food consumption. The food-disease belief was not significantly related to attitude concerning caloric intake. Neither of the two beliefs was found to be related to an attitude consistent with decreasing soft drink consumption.

Attitudes and Behaviors. Attitudes were found to be consistent with behaviors regarding sugar consumption. Among respondents with attitudes consistent with decreasing soft drink consumption, sugary food consumption, and caloric intake a greater number than would be expected by chance decreased consumption of soft drinks and sugary foods.

A more extensive examination of the relationships among attitudes and behaviors was made in which beliefs were held constant. Among those whose beliefs and attitudes disposed them to decrease sugar-related consumption a greater proportion than that expected by chance had decreased consumption of soft drinks and sugary foods.

Demographics and Beliefs. The results provide some support for hypotheses linking demographic characteristics with beliefs. Those respondents agreeing that everyone should eat less sweets were more likely to be White, college-educated, and aged 25 or older. However, no significant associations were found for the belief that certain foods are linked to diseases.

Tests of association among demographic characteristics and attitudes, holding beliefs constant, were also made. A greater number of significant associations were found between demographics and attitudes with beliefs held constant than when only simple associations between beliefs and demographics were tested.

Age was the single factor most commonly having a significant relationship with attitudes. Whether individuals believed everyone should eat less sweets or diseases can be linked to food intake appeared to have little effect on association between age and attitudes. By contrast, attitudes could be linked to education, income, and race only when beliefs were controlled for.

Source of Influence and Behaviors. The hypothesis predicting those whose primary source of influence was a professional or friend/relative would be more likely to have decreased sugar intake was not supported. Although doctors, dentists, nurses, and extension workers were the most frequently mentioned primary sources of information for makiny any health or diet related change, their influence was not significantly different from other sources with respect to initiating changes in consumption of soft drinks and sugary foods. Decreased soft drink consumption was most common among those reporting friends or relatives (45%) and groups or classes (44%) as their primary source of influence. Decrease in sugary food consumption was most common among respondents reporting groups or classes (54%) and written material other than newspapers (54%) as primary source of influence. However, results did indicate support for the hypothesis concerning number of influences. Those respondents listing two or more influences were more likely to have made changes in their consumption of soft drinks and sugary foods.

DISCUSSION

Findings of this investigation generally supported the relationships among demographic variables, beliefs, attitudes, and behaviors which were postulated using the Fishbein model. Changes in sugar-related consumption were found to be consistent with behavioral beliefs and attitudes. Effects of demographic variables on behavioral attitudes appeared to be mediated by beliefs related to specific behaviors. Some support concerning the effects of subjective norms on behavior was also provided.

The belief that everyone should eat less sweets was found to be salient to attitudes regarding sugary food consumption and caloric intake but not soft drink consumption when these were not linked to relevant behaviors. Belief in a link between certain foods and disease was only salient to attitude toward sugary food consumption when not linked to specific behaviors. It is possible some respondents did not classify soft drinks as sweet or sugary foods, especially since no distinction was made between regular and artificially sweetened soft drinks in the attitude question. It may also be that changes in soft drink consumption were considered less significant by respondents. While decrease in soft drink consumption was less prevalent than decrease in sugary foods, reasons for both types of behavioral change followed the same pattern, emphasizing promotion of health or prevention of disease, reduction in sugar intake, loss of weight, and reduction of intake of artificial substances. Results linking behavioral beliefs and attitudes were generally consistent with findings by Schwartz [21], and Carruth and Anderson [2] relating nutritional knowledge to attitudes.

Results concerning associations among attitudes and sugar-related consumption behaviors are consistent with those of a number of studies in which attitudes were found to be mediators of the food choice process [2, 10, 12, 22]. Controlling for behavioral beliefs strengthened the attitude-behavior association; this result substantiated evidence concerning the separate links made between beliefs and attitudes and attitudes and behaviors.

From results concerning the belief-attitude and attitude-behavior links one might conclude the latter is the stronger. It is not clear that we can safely make this interpretation because of the measurement problems inherent in the data set; the belief statements used represented general beliefs rather than Fishbein's variable beliefs that behaviors would lead to certain outcomes.

According to the Fishbein model demographic variables are indirectly linked to behaviors through beliefs and attitudes. Results indicating younger, White respondents with higher levels of education and income are more likely to have beliefs and attitudes consistent with improved dietary practices are generally in agreement with those of other studies [3, 5, 9, 12, 24, 29]. It seems clear that effects of education, income, and race on attitudes are mediated by salient beliefs. It is less clear the effects of age are thus mediated; differential age cohort effects may be influencing these results.

As in another study [4], professionals, friends or relatives were the most frequently cited source of influence responsible for initiating dietary change of any type. However, their influence was not significantly different from that of other sources in relation to change in sugar intake. One explanation of this result is the hypothesis was incorrect; professionals and friends or relatives are not the appropriate referents for sugar-related behavior. Another explanation involves limitations of the data with respect to measuring subjective norms. The data set did not include information about what others expect the respondent to do but did indicate what source of information the respondent said influenced any dietary changes, not just those related to sugar consumption. Within the context of the Fishbein model, respondents listing more than two sources of information might be viewed as having stronger motivation to comply with referent others causing the subjective norm to be weighted more heavily in the decision process. Other interpretations are that respondents listing more than two influences are more aware of the sources of nutritional information available to them or more concerned about nutrition and health.

According to the Fishbein model, changes in belief precede changes in attitude and change in attitude precede changes in behavior. In this survey respondents were asked to report behavioral changes made during the preceding three years, while attitudes and beliefs were measured as of the time of interview. Under these circumstances it is difficult to attribute causality.

CONCLUSIONS AND IMPLICATIONS

Unlike other investigations into relationships among demographic characteristics, beliefs, attitudes, and dietary behaviors, this study used a theoretical model to generate hypotheses regarding relationships among these variables. The FBI model was chosen because of its proven success in predicting behaviors and its applicability to the problem. Although data did not conform exactly to the components specified in the model, results indicate the model's usefulness in explaining food consumption behavior. Extending use of the model to explanation of consumption in other food groups would thus seem feasible.

An improved understanding of the relationships among consumer characteristics, beliefs, attitudes, and behaviors with regard to food consumption has practical implications for the development and design of nutrition education and food marketing programs. Because beliefs influence behaviors by way of attitudes concerning those behaviors, nutrition education attempts aimed solely at providing nutrition knowledge (a set of generalized beliefs) may not be as effective as those programs which seek to change beliefs concerning behavioral outcomes and evaluation of outcomes. Furthermore, results indicate that persons with certain demographic characteristics may be more likely to hold attitudes and beliefs inconsistent with positive dietary changes. Nutrition information campaigns should continue to target groups of individuals with those traits--i.e., who are older, less educated, nonwhite, and have lower incomes. Multiple sources of influence were found to be associated with dietary changes. This also has implications for nutrition information and education efforts; providing many sources of nutritional information to the public will be useful in reinforcing specific messages regarding dietary guidelines.

Food marketers may also find these results useful for developing a better understanding of the role social and psychological variables play in the food choice process. In particular, results of this investigation point out the importance of appropriately defining and measuring beliefs, both behavioral and normative, salient to the behavior of interest.

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CONSUMER RESPONSE TO CHANGING FINANCIAL PRACTICES: KNOWLEDGE OF AND INFORMATION SOURCES USED IN SELECTION OF THREE RECENT SAVINGS PRODUCTS.

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ABSTRACT

Adoptors of negotiable order of withdrawal accounts (NOW's), All Saver Certificates (ASC's) and Individual Retirement Accounts (IRA's) tended to be consumers 45 years of age or over holding white collar occupations. They did not differ significantly from non-adoptors by either income or education. Consumers were generally aware of the three innovations and most believed they had a good understanding of these products. Respondents relied on financial instituion personnel for most of the information used in making savings decisions.

The first few years of the 1980's have been a period of accelerating change in financial products in the United States. Until recently, individual consumers' were slower than business to respond to the forces motivating changes in financial practices. In part this was because they lacked the necessary financial sophistication to make such investments [2]. As new institutions and instruments have emerged to compete for the savings of individual consumers family economists have recognized a need to know how consumers respond to these changes [3]. This study undertakes to examine consumer response to three of these new offerings.

Three major financial products were introduced in the early 1980's that give us a basis for examining consumer response to the changing financial environment. The Monetary Control Act of 1980 authorized nationwide negotiable order of withdrawal accounts (NOW's) beginning in January 1981. These accounts allow individuals to earn 5 1/4 percent interest on checkable deposits at commercial banks, thrift institutions and share draft accounts at credit unions. These interest-bearing checking deposits now account for almost one-fifth of total transaction balances [2].

The Economic Recovery Tax Act of 1981 granted financial institutions the power to issue tax-exempt All Saver's Certificates (ASC's) beginning October 1, 1981 and ending December 31, 1982. The purpose of these certificates was two-fold. First, they were intended to attract new retail money back into banks and savings and loans (S&L's). Second, they were expected to attract new money at a cost below prevailing market rates. ASC's paid 70 percent of the yield of 52 week treasury bills. The first $1,000 of interest earned by individuals or $2,000 for people filing joint income tax returns, was tax free. stated percentage yield on the initial certificates issued the first week of October 1981 was 12.61 percent [5]. The after-tax yield for a person in the 50 percent tax bracket was thus over 25 percent. In comparison the 7 day average yield for money market mutual funds was close to 16 percent [6].

The number of wage earners who could open an Individual Retirement Account (IRA) was dramatically increased by the Economic Recovery Tax Act of 1981. After January 1, 1982 any person who was working and below the age of 70 1/2 could open an IRA. Prior to this date only people who did not participate in a government approved retirement plan were eligible for an IRA. The annual amount an individual could put into an IRA was also increased from $1,500 to $2,000 [1,2].

The purpose of this study was to examine the following questions: 1) who opened these new accounts, 2) why did they open the accounts, 3) where did they open the accounts, and 4) where did they obtain the funds for opening the accounts. Finally the study explored consumer knowledge of these new financial instruments and sought to determine the sources of information used by consumers in making decisions on the utilization of these savings instruments.

METHODOLOGY

Pre-tested questionnaires were mailed to a proportionate stratified sample of the Milwaukee SMSA's housholds at three different time periods. Data for the consumer utilization of NOW accounts were obtained the third week of March 1981, three months after the accounts were legally available and about four months after the SMSA's financial institutions had started promoting these accounts. Information on the consumer response to the introduction of ASC's were collected the first week of November 1981, a month after the certificates were available and about 10 weeks after they were first promoted. The questionnaire to obtain data on response to IRA's was mailed mid-March, 1982.

For all three studies about 750 questionnaires were mailed out. The response rates for the three surveys were 51 percent for NOW accounts, 42 percent for the IRA study and 38 percent for the ASC study. Not all of the respondents were eligible for all of the products. For example, in the ASC study respondents who did not have savings and checking accounts were dropped and in the IRA study non-employed respondents were deleted. Thus the usable responses were 492 for NOW accounts, 244 for ASC's and 232 for IRA's. Respondents in all three surveys had higher incomes, more education, and higher status occupations than did the general population of the studied metropolitan area. One would expect respondents to more likely have these characteristics. This response bias should not impair the usability of the data since the accounts generally require higher incomes or higher balances.

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RESULTS AND DISCUSSION

Demographic Characteristics

NOW Account Adoptors. Male and female NOW account adoptors were much more likely to be retired than non-adoptors. For both adoptors and non-adoptors, about equal percentages were in white collar occupations (Table 1). However, male non-adoptors were much more likely to be in blue collar occupations. Adoptors were more likely to be 65 years of age or over. Adoptors also tended to have higher levels of education. A near majority (46 percent) were college graduates, while two-thirds of non-adoptors had not completed college. Middle-income households were more likely to be non-adoptors, while upper income householders were more likely to have NOW accounts.

Table 1. Demographic Comparison of Holders and Non-holders of NOW Accounts.

	Male		Female	
Occupation	Holders	Non-Hold.	Holders	Non-Hold.
Semi-skill/ skilled	15%	30%	11%	4%
Sales/ clerical	2	6	22	24
Manager/ professional	53	51	18	28
Retired	28	10	24	7
Student/ unemployed	2	4	1	34
Homemaker	0	0	23	34
	100	100†	100	100
	X^2=23.4	Sig.=.000	X^2=28.5	Sig.=.000
Age				
18-24	1	10	4	9
25-34	13	23	17	23
35-44	16	21	12	24
45-54	21	24	18	22
55-64	20	15	24	15
65 and over	30	8	25	7
	101†	101†	100	100
	X^2=35.8	Sig.=.000	X^2=30.9	Sig.=.000
Education				
High school or less	26	34	61	50
Some college	29	33	15	29
College grad.	23	19	13	13
Post-grad.	23	14	11	8
	101†	100	100	100
	X^2=5.21	Sig.=.156	X^2=7.81	Sig.=.05

Household Income	Holders	Non-holders
Less than $20,000	29	30
$20,000-34,999	37	47
$35,000 and over	34	24
	100	101†
	X^2=4.49	Sig.=.11

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†Due to rounding totals may not equal 100.

ASC Adoptors. The primary distinguishing characteristics of ASC holders were their middle age and white collar occupations. Seventy percent of the ASC holders were employed in white collar occupations (Table 2). A majority of the ASC purchasers were middle aged. Twenty-six percent of ASC holders versus 14 percent of non-holders had a post-graduate degree. However, for 41 percent of the holders the highest level of education was high school. The education, occupation and age of ASC holders were reflected in their incomes. Nearly one-third of the holders had incomes over $35,000 a year, while another third had incomes between $25,000 and $35,000. However, the reader should note that nearly 30 percent of ASC buyers also had incomes between $15,000 and $25,000. In fact, income differences between holders and non-holders were not statistically significant (.28 level).

Table 2. Demographic Comparison of Holders and Non-holders of ASCs.

	Male		Female	
Occupation	Hold.	Non-hold.	Hold.	Non-hold.
Blue collar	19%	28%	22%	27%
White collar	70	48	25	28
Homemaker	---	---	37	30
Other	11	24	16	15
	100	100	100	100
	X^2=4.9	Sig.=.08	X^2=.91	Sig.=.82
Age				
18-44	35	48	34	52
45-64	57	34	47	32
65 and over	7	18	19	16
	100	100	100	100
	X^2=6.1	Sig.=.05	X^2=3.1	Sig.=.17
Education				
High school or less	41	36	48	47
College grad/ some college	33	50	30	42
Post grad.	26	14	16	11
	100	100	100	100
	X^2=3.6	Sig.=.17	X^2=.97	Sig. .62

Income	Holders	Non-holders
Under $15,000	9	23
$15,000-24,999	29	29
$25,000-34,999	31	27
$35,000-49,999	17	14
$50,000 and over	14	7
	100	100
	X^2=5.1	Sig.=.28

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†Other= retired, unemployed, and students.

IRA Adoptors. The respondent most likely to have opened an IRA was in a white collar occupation with a college degree making over $50,000 per year and about 10 years away from retirement (Table 3). This profile is hardly surprising since an IRA is a tax deferred retirement plan. However, as with most generalizations, this profile is incomplete. Some blue collar respondents (16 percent) did open retirement accounts. Also, nearly the same percent of high school graduates as college graduates were investing in IRA's (21 versus 25 percent). Interest in IRA's was age sensitive, with the older the respondent, the more likely he/she had an IRA. However, the 35 to 44 year old group was nearly as likely as the 45 to 54 year olds to have this account (22 versus 28 percent). Finally, the more income the household had the more likely it had an IRA. But, the $15 to $25 thousand income group was nearly as likely to have opened an IRA (23 percent) as the $25 to $35 thousand group (19 percent).

Table 3. Demographic Comparison of Holders and Non-holders of IRAs.

	Male		Female	
Occupation	Holders	Non-hold.	Holders	Non-hold.
Blue collar	16%	29%	5%	9%
White collar	76	60	50	52
Homemaker	--	--	36	32
Other	8	11	9	7
	100	100	100	100
Age				
25-34	10%	37%	13%	42%
35-44	16	19	22	23
45-54	29	24	22	21
55-64	39	13	36	10
65 and over	6	7	7	4
	100	100	100	100
Education				
High school or less	34%	33%	48%	53%
College grad/ some college	54	54	43	39
Post grad.	12	13	9	8
	100	100	100	100

Income	Holders	Non-holders
Less than $15,000	4%	15%
15,000-24,999	18	18
25,000-34,999	25	33
35,000-49,999	31	23
50,000 and over	22	11
	100	100

Reasons for Opening and Not Opening Accounts

NOW's. Earning interest on checking accounts was the primary reason for opening a NOW account (82 percent). The ability to switch to an S&L, to consolidate accounts at one institution, to have quick access to savings or to combine savings and checking accounts were all very minor reasons for adopting the NOW accounts (Table 4).

As important as it is to know why people opened the accounts, it is probably just as valuable to know why people did not open the accounts. The pricing of the accounts and inertia were of equal importance in explaining why people did not open NOW accounts. Over half of the respondents who did not open the accounts thought the minimum balances were too high and were satisfied with their current checking accounts (Table 4). The increasing sophistication of financial service consumers may be demonstrated by the fact one-third of the respondents also believed that they could earn a better return on their dollars in other savings or investments.

ASC's. The primary reasons respondents did not purchase an ASC were due to the characteristics of the certificate and not to a lack of understanding of its benefits. Thirty-one percent thought the ASC required too much money while 29 percent said the maturity was too long (Table 4). However, nearly one-quarter of the people who did not open an ASC either said they lacked enough information or found it difficult to compute the yield. Relatively few respondents were totally uninformed however, since only 8 percent chose the general response, "the requirements are too confusing."

Avoidance of paying taxes was the primary reason given by 86 percent of the 36 respondents that opened an ASC (Table 4). The higher after-tax yield was also an important reason.

IRA's. Ninety-one percent of the IRA holders opened this account to defer taxes (Table 4). The second most important reason expressed by 70 percent of the adoptors was the fear that social security would be inadequate.

The majority (55 percent) of the respondents did not open IRA's because they already had a pension plan. The other leading reason (35 percent) for not opening an IRA was the length of time the deposits would be tied up (Table 4). Even though banks and S&L's offered fixed and variable interest rate IRA's with the variable rates tied to different indices, few people said confusion in computing yield was a reason they avoided IRA's. However, there is a potential for better communication.

Eighteen percent of the respondents said they needed more information before they opened the account. Another 17 percent said the balance requirements were too high indicating a likely misunderstanding of the $50 minimum balance. Finally, since 14 percent of the respondents said other investments give a better return, it appears some people may not understand the advantage of earning interest on dollars that would be paid in taxes if IRA's were not used as a tax shield.

Place Where Accounts Were Opened

NOW's. Banks where people had their original checking accounts captured two-thirds of the NOW accounts. S&L's were able to gain 23 percent of the interest-bearing checking accounts, while credit unions and banks where the NOW account holder did not have a previous checking relationship accounted for the remaining 11 percent.

Table 4. Reasons Why Respondent Did or Did Not Open Account.

	Percent Mentioned[1]
NOW	
A. Reasons Why the Account Was Opened (n=129)	
Earn interest on checking	82%
Consolidate all accounts	14
Combine checking and savings	12
Quick access to savings	12
Prefer dealing with an S&L	5
Other	12
B. Reasons Why the Account Was Not Opened (n=319)	
Minimum balances too high	59%
Satisfied with current checking	57
Earn a better return in other savings/investments	34
Requirements too confusing	8
Other	14
ASC	
A. Reasons Why the Account Was Opened (n=36)	
Avoid paying taxes	86%
Higher yield	54
Safety	0
Provide money for housing	14
B. Reasons Why the Account Was Not Opened (n=208)	
Require too much money	31%
Maturity is too long	29
Not enough information	24
After tax return yield too hard to compute	22
Better return on six month money market certificate	15
Other saving/investments give a better return	15
Requirements are confusing	8
IRA	
A. Reasons Why the Account Was Opened (n=53)	
Tax deferral	91%
Social security will be inadequate	70
Company pension plan not enough	38
Social security will be unavailable	25
Company pension plan unavailable	25
Other	4
B. Reasons Why the Account Was Not Opened (n=179)	
Existing employer pension plan	55%
Money is tied up too long	35
Deposit requirements too high	20
Not enough information	18
Other savings/investments give a better return	14
Plan to open in future	13
Requirements are confusing	4
Interest rate computation is confusing	4
Social security adequate	3

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[1] Multiple answers were possible therefore totals do not equal 100 percent.

ASC's. S&L's were successful in capturing a majority (61 percent) of the certificate holders while banks had a penetration of 28 percent. The remaining 11 percent of the respondents opened an ASC at both a bank and S&L (Table 5). It is interesting to note the ability of each type of financial institution to retain their current savings account customers when this new savings instrument was introduced.

Twenty-one of the ASC holders had savings accounts at a bank. Nine (43 percent) of these people opened an ASC at a bank while 8 switched to a S&L and the other 4 purchased an ASC at both financial institutions. On the other hand the S&L's were more successful in retaining their current customers. Twenty-eight of the ASC adoptors had savings accounts at S&L's. Twenty people (71 percent) in this group stayed with S&L's while 4 switched to banks and another 4 opened the ASC at both banks and S&L's.

IRA's. Savings and Loans captured 40 percent of all IRA accounts in the present study (Table 5). Banks were in second place with 23 percent of the accounts. Both of these financial institutions together, therefore, accounted for 63 percent of all IRA's opened. It is possible this combined penetration of the IRA market is somewhat higher since eight percent of the IRA's were opened through an employer and some of these employer plans may have been with a bank or S&L. Thus, it is likely that other types of non-depository institutions obtained about 35 percent of all IRA's.

Generally, people opened IRA's at institutions where they already had accounts or investments. This is especially true for brokerage houses, credit unions, and mutual funds since none of these financial institutions attracted new accounts. The very low penetration of IRA's by mutual funds (only one person opened an account there) is somewhat surprising. In this portion of the study, 21 percent of the respondents who had savings accounts owned shares in a money market mutual fund. Therefore, at least early in the introduction of these IRA's, it appears these funds were not successful in tapping their current customer base.

Fourteen percent of the respondents opened their IRA at a bank where they did not have a previous account relationship, while 21 percent did this at an S&L. At first glance, it may seem banks were not as successful as S&L's in attracting new customers. However, in this study, 84 percent of the respondents already had an account (checking) at a bank, while only 53 percent of the respondents had an account (savings) with a S&L. Therefore, a bank, when offering a new account, would be much more likely to attract a current customer since this financial institution has such a high penetration of the market with existing accounts.

Sources of Funds

NOW's. It appears that a number of people were maintaining a fairly high balance in their

Table 5. Place Where Account Was Opened

NOW	Percent Mentioned
A. Number Who Opened NOW Account (n=448)	
Opened	28%
Not opened	72
	100
B. Place Where the Account Was Opened (n=129)	
Old Bank	67%
Savings and Loan	23
Credit Union	8
New Bank	2
	100
C. Reason for switching financial institutions (FI) (n=42)	
New FI was more convenient	52%[1]
Consolidate accounts at one FI	48
New FI had a lower minimum balance	38
Disliked the service at the old FI	21
Other[2]	40
ASC	
A. Number who opened ASC (n=244)	
Opened	15%
Not opened	85
	100
B. Place where the account was opened (n=36)	
Savings and Loan	61%
Bank	28
Both Savings and Loan and Bank	11
	100
C. Retention of consumer by FI Respondents who had other savings accounts at a bank and who opened an ASC (n=21) at a:	
Bank	43%
S&L	38
Bank and S&L	19
	100
Respondents with other savings accounts at an S&L who opened an ASC (n=28) at a:	
Bank	14%
S&L	72
Bank & S&L	14
	100
IRA	
A. Number who opened IRA (n=232)	
Opened	23%
Not opened	77
	100
B. Place where the account was opened (n=53)[1]	
S&L	40
Bank	23
Insurance company	13
Employer	8
Brokerage house	8
Credit union	5
Mutual fund	2

checking accounts even when they were not receiving interest on their money. Forty-one percent of the NOW account holders opened these accounts with only checking account transfers (Table 6). Of course, S&L's had relatively low minimum balances, but 50 percent (not shown in the table) of the people who opened their accounts at their old bank did so using checking accounts as the only source of funds. On the other hand, a third of the NOW account holders moved some money from savings to meet the balance requirements.

ASC's. Certificate adoptors were asked where they obtained funds for their ASC's. They could give multiple sources as an answer, but they were not asked how much money was taken from each source. As presented in Table 6, 49 percent of the adoptors said they obtained funds from their passbook accounts. Equal percentages (23) obtained funds from their checking accounts and other savings accounts. Six-month money market certificates and money market mutual funds accounted for 20 percent each. Since one of the prime reasons for granting the authority to issue ASC's was to attract new retail funds back into financial institutions, especially from money market funds, the behavior of money market mutual fund holders was analyzed in greater depth.

Twenty-five percent (n=72) of the people responding to this survey owned shares in a money market mutual fund. Of this group of fund investors, 22 percent (n=16) opened an ASC account. However, less than a majority (44 percent) of these people took funds from the money market fund to buy their certificate. This means only 7 respondents (10 percent) out of the 72 who had invested in a money market fund took funds from this source to open an ASC. The primary reasons people moved money from a mutual fund were the higher yields in ASC's and the ability to lock in this yield for 12 months.

IRA's. Specific information was not obtained on the source of funds used to open IRA accounts.

Sources of Information

ASC's. Large differences exist between people who purchased and did not purchase an ASC. Three-quarters of the adoptors claimed they completely understood the ASC's requirements and yield while less than one-third of the non-adoptors said this. However, some information had reached most people since less than 20 percent of the non-adoptors said they did not understand them at all. This raises the question of where the respondents obtained their information.

The primary source of information for ASC's was employees at a financial institution (Table 7). The second most important source was some type of print media. It is interesting to note that with this complex product, radio and TV were far down the list as sources of information.

IRA's. Virtually all of the IRA eligible respondents had heard of IRA accounts

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[1] Multiple answers were possible therefore totals do not equal 100 percent.

[2] Made up of over 6 different responses, each with less than 10 percent mentioned.

Table 6. Sources of Funds for Opening Accounts

NOW (n=129)	Percent
Checking account only	41
Combination checking and savings	33
Savings account only	12
Paycheck	6
Other	8
	100

ASC (n=36)	Percent Mentioned[1]
Passbook savings	49%
Extra money in checking account	23
Other savings accounts	23
Six month money market certificates	20
Money market mutual fund	20
Stocks, bonds, investments	14
Reason for switching funds from money market fund to ASC's (n=7)[1]	
Higher yield	86%
Guaranteed interest	71
Safety	29
Other	14

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[1] Multiple responses were possible

Table 7. Sources of Information.

	Percent Mentioned[1]	
Sources of information	ASC	IRA
Personnel at a financial institution	63%	67%
Brochures at financial institution	32	41
Print media advertisements or articles	26	30
Material enclosed with monthly statement	22	27
Professional advisors	17	33
Friends or family	13	21
Radio and television	11	14
Government sources	7	0
Personnel at insurance companies, credit unions and brokerage firms	0	28
Other	0	8

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[1] Multiple responses possible.

(98 percent). Nearly two-thirds of the survey participants claimed to fully understand the requirements for the accounts. Another one-third said they somewhat understood them. Only three people said they didn't understand them. Based on these findings it is probably safe to say that the media coverage and promotional efforts of financial institutions were effective in making people aware of IRA's and providing a majority of consumers with enough information so that they believed they had a clear understanding of the product.

Banks and savings and loan personnel were or would be used by over two-thirds of the respondents for additional information on IRA's. Brochures at the financial institution were the second most important source (41 percent). Radio and television ads and programs were the single least important source of additional information. Even though the electronic media were seldom used sources of additional information it is possible that the electronic media make people aware of the product so that they then sought more detailed information before making a final decision.

Although not presented in a table, it was determined that only one person out of 14 who opened an IRA at a bank said they did so because this financial institution had knowledgeable personnel. For insurance companies, 5 out of 8 (63 percent) gave this as a reason as did 25 percent of S&L IRA holders. It should be remembered when comparing the above information that respondents did not rate financial institutions in comparison to each other. They simply stated why they opened an IRA at a specific institution.

NOW's. Respondents were not asked about their level of understanding or where they obtained information on NOW accounts.

CONCLUSIONS

Many family and consumer economists are concerned with the need to educate consumers to the selection of appropriate financial investments including savings products. While aggregate data is available to indicate the gross movement of money in the economy, little information is available on specific response to individual products or to the information sources used by families in making saving decisions. This study looked at consumer response in one SMSA to three new savings instruments introduced in the past two years. Based on the findings in this study, it may be concluded that these innovations had limited success in attracting small savers back to traditional institutions due to the sophistication of the consumer in evaluating the alternatives available to them. Generally, these new savings instruments were used by consumers 45 or over holding white collar positions. They were not significantly different from non-adoptors by either income or education.

Consumers were generally aware of the new innovations. Most believed that they had a good understanding of these products. As would be expected, adoptors indicated they were more knowledgeable on these products than did the non-adoptors. There was some indication that some consumers were confused about the more complex issues of tax benefits of some of the products.

Apparently, consumers rely heavily on financial institution personnel for the information they use in making savings decisions. In addition to the personnel they also rely on the brochures distributed by these institutions. As the investment became more complex there was a greater reliance on professional advisors for information. Approximately one-fourth of the respondents used the printed media as a source of information.

To the extent that the personnel employed by financial institutions are trained to counsel the individual on how to maximize their potential return, the heavy reliance on this source may be justified. The opportunity to train future consultants and financial institution personnel is one being pursued on many university campuses. This study supports the need for knowledgeable counselors.

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SENSITIVITY OF HOUSING PRICES
TO ECONOMIC AND SOCIAL CHANGES

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ABSTRACT

The determinants of housing sale price were estimated for houses sold in two time periods, 1971-1976 and 1977- 1980 using Hedonic price theory and regression analysis. Natural gas consumption did not affect sale prices in the first period but higher consumption levels reduced sale price in the second period. In both periods housing prices were positively related to mortgage interest rates; the contribution of mortgage rates to housing price was greater in the latter than earlier period.

The decade of the 1970's was characterized by unusual economic and social changes which potentially affected the sale price of housing. Escalating oil prices and threatened supplies introduced the salience of long-term operating costs as a consideration to buyers of housing. Mortgage interest rates rose approximately 6 percentage points between 1971 and 1980, potentially dampening both the supply of and demand for housing. In the Columbus, Ohio SMSA quality of education tended to become increasingly disparate by school system as the decade progressed.

This study analyzed the sensitivity of housing prices to changes in energy costs, mortgage interest rates and perceived changes in school quality that occurred between 1971 and 1980 in the Columbus, Ohio SMSA. The model of housing prices was derived from hedonic price theory and estimated with regression analysis. Knowing the reactions of buyers to the relative energy consumption of housing results in more accurate calculation of returns to energy conservation investments.

DETERMINANTS OF HOUSING VALUES

Housing can be described as a function of the attributes or service flows of which it is composed and for which it is demanded. Thus the sale price of housing is seen as a function of the prices of each of the attributes of the home. This study hypothesizes that the determinants of housing value are as follows:

$$P_i = P_i (S_i, L_i, N_i, A_i, PS_i, E)$$

where

S = a vector of structural characteristics including energy influencial characteristics
L = a vector of lot characteristics
N = a vector of neighborhood characteristics
A = a vector of accessibility characteristics
PS = a vector of public service characteristics
E = a vector of economic characteristics
i = refers to the individual house.

HYPOTHESES

Energy Costs

Prior to 1973 when energy costs were low it is unlikely that thermal efficiency would have been capitalized into sale price. During the oil embargo of late 1973 and for the next few years consumers' knowledge of the salience of energy increased but consumers were skeptical of the validity of the shortages and the likelihood of their continuation [31, 2]. However, by 1977 price controls were beginning to be lifted; the price of natural gas increased 64 percent between 1971 and 1976 and had nearly doubled by 1980 in the Columbus area.

The effect of thermal integrity on sale price is largely undetermined. In the early 1970's Grether and Mieszkowski [12] found the presence of insulation to be unimportant. However, Johnson and Kaserman [15] discovered that homes with lower fuel bills tended sell for more than those with higher fuel bills. Homes heated with natural gas were shown to sell for more than those heated with the more expensive fuel oil after 1974 by Halvorsen and Pollakowski [14].

Mortgage Interest Rates

Interest rates reflect not only efforts to control inflation through monetary policy but also consumers' future inflationary expectations. High interest rates reduce starts and thus may increase the price of existing housing. Because high interest rates also tend to dampen demand the effect of limited supply in increasing housing prices may be abated. However, income tax deductions and population growth stimulate demand. If in addition, buyers' expected housing price increases exceed interest rates, demand will be robust and housing prices will be boosted.

Social Changes

Other changes occurred in the Columbus SMSA during the 1970's. Between 1969 and 1981 the citizens of Columbus had defeated every school levy proposed. Thus, the Columbus City School system was likely to have declined in quality. Furthermore, in the latter 1970's busing for school desegregation was implemented in the city of Columbus. This may have reduced the perceived quality of city versus suburban schools to home buyers.

Based on the economic and social changes discussed above it was hypothesized that:

1. Consumers buying homes after 1976 were more likely than those buying homes prior to 1977 to have paid extra for homes using less natural gas, size and other characteristics held constant.
2. The hedonic prices of the structural characteristics increasing thermal efficiency of the home increased after

1976 reflecting higher fuel costs. Likewise the hedonic prices of features reducing thermal efficiency decreased after 1976.

3. After 1976 increases in mortgage interest rates raised housing prices.
4. After 1976 the imputed value of school quality increased.

SAMPLE AND DATA

The sample originated from gas meter records provided by Columbia Gas of Ohio for homes located within the Columbus, Ohio, Standard Metropolitan Statistical Area (SMSA), of 1973 monthly natural gas consumption. A questionnaire was mailed to the addresses on the consumption records, eliciting detailed descriptions of homes, especially the features affecting energy use. A 54 percent return rate was obtained. Approximately one of every four single-family homes from which a questionnaire was returned was sold to a new owner between 1971-1980. These 615 homes form the sample for analysis.

All sample homes are previously owned, single family detached dwellings which are presently owner occupied. New homes were excluded as their prices are assumed to be derived more from building costs than the prices of existing houses where the latitude for achieving equilibrium of demand and supply bids is greater. The sample is limited to detached, owner-occupied single family dwellings in order to ensure that energy costs are borne solely by the buyer, rather than a renter as would likely be the case for multiple unit dwellings. Also, most homes in the Columbus SMSA are of this type, allowing generalizability.[1]

All of the sample homes are located in the Columbus, Ohio, SMSA and all are heated with natural gas. Natural gas has been adopted for space heating by 57 percent of American but 84 percent of Columbus, Ohio households [28,29]. Columbus has 5701 heating degree days per year which is somewhat typical for much of the midwest.

Data from several sources were used in conjunction with the questionnaire and Columbia Gas of Ohio 1973 consumption records. Sources of data are listed in Appendix A. Data components were matched by the home's address.

Missing and inconsistent data were two of the most difficult problems of this study. A few sample members were eliminated because of incomplete data. Most other missing data were scattered throughout the variables and sample members. In general, Multiple Listing Service and tax data were substituted for missing questionnaire information when possible, otherwise means by geographical area were used as substitutes. For a more detailed description of treatment of missing data, see Longstreth (1981).

VARIABLES AND METHODOLOGY

The literature using the hedonic price technique through regression analysis to calculate salient determinants of housing is well developed. Structural characteristics have been demonstrated to be the most important features determining sale price [25, 24, 7, 12, 18]. Location, neighborhood and public service characteristics have also been shown to be salient [17, 24, 22, 18]. Selected measures of these characteristics used in this study include distance from the central business district, aesthetic qualities of the neighborhood and quality of schools. All of these tend to increase the value of housing [17, 24, 22, 18]. Variables selected to reflect the characteristics of the houses are defined in Appendix A; means are reported in Exhibit I. Selection was based on relevance as demonstrated in previous studies and availability.

Exhibit I. Means and Standard Deviations of Variables

Variables	Mean	Standard Deviation
Total Sale Price of house in 1980 dollars	51,976.95	23,109.13
Living area	1286.78	422.15
House age	22.68	15.44
Stories of living area	1.63	0.67
Number of garage spaces	1.00	0.77
Presence of air conditioning	0.36	0.48
Presence of fireplace	0.29	0.46
Presence of family room	0.50	0.50
Presence of swimming pool	0.02	0.15
Number of bathrooms	1.62	0.62
Lot area	9240.84	5066.91
Natural gas consumed	1151.50	385.12
Income	29904.30	8308.87
Distance from CBD	6.78	2.12
Pupils per teacher	25.00	
Mortgage interest rate	9.08	1.13

To estimate the value of the characteristics sale price was regressed on the variables measuring the characteristics. The regression coefficient was interpreted as the implicit or hedonic price of that feature. The parameters were established with ordinary least squares regression. Preliminary analysis was used to eliminate severely collinear variables. The property tax cost variable was eliminated because its collinearity with the other variables in the first equation was so high that the consequent bias was deemed to exceed errors from misspecification.

Heteroscedasticity existed in these data as indicated by a Goldfeld-Quandt test. The error term was hypothesized to be proportional to house size thus the equations were reestimated using weighted least squares with the weight equal to the inverse of house size squared.

The equations were estimated in both linear and nonlinear form, both of which are consistent with hedonic price theory. The nonlinear, quadratic form, which better fit the data, is reported here.

THE EMPIRICAL ANALYSIS

The model used to determine the salient characteristics of housing sale price was estimated for houses sold in different time periods to assess how the imputed attribute prices were affected by economic and social changes. The model was estimated first, for homes sold between January, 1971 and December, 1976 and second, for homes sold between January, 1977 and July, 1980. Results are presented in Exhibit II.

Exhibit II. Regression Analysis of Model over Time: Sale Price as Dependent Variable

	Equation 1 (1971-1976)		Equation 2 (1977-1980)	
	Coefficient	t-ratio	Coefficient	t-ratio
STRUCTURAL CHARACTERISTICS				
House size	17.99	8.72***	17.14	7.06***
House age	-116.73	-2.46**	21.61	0.50
Number of stories	1753.30	1.99**	2633.53	2.78**
Number of garage spaces	2466.83	3.12***	2881.14	4.06***
Presence of air conditioning	1998.50	1.59	2878.10	2.66**
Presence of fireplace	2351.42	1.95**	1771.66	1.29
Presence of family room	2293.87	2.46**	3627.86	3.25***
Presence of swimming pool	10499.94	2.32**	7563.09	2.55**
Number of bathrooms	3941.75	2.76**	3280.80	2.12**
ENERGY CONSERVING CHARACTERISTICS				
Quantity of Natural Gas (ccf)	5.66	0.74	-15.84	-2.26**
Quantity of Natural Gas^2	-0.0006	-0.21	0.008	2.63**
LOT CHARACTERISTICS				
Lot size	-0.002	-0.03	0.16	1.19
NEIGHBORHOOD CHARACTERISTICS				
Income	0.74	7.81***	0.58	5.82***
ACCESSIBILITY CHARACTERISTICS				
CBD	6211.73	3.67***	4917.13	3.23***
CBD^2	-440.66	-3.59***	-335.72	-3.07***
PUBLIC SERVICE CHARACTERISTICS				
Pupil/teacher ratio	-1060.66	-3.30***	-2601.03	-6.66***
MORTGAGE INTEREST RATES	1800.77	1.81*	2794.80	5.23***
R^2	.80		.82	
F Ratio 3	71.20***		73.80***	

*$p \leq .10$
**$p \leq .05$
***$p \leq .005$

Natural Gas Consumption

The results in Exhibit II substantiate the first hypothesis. Between 1971 and 1976 housing price were unaffected by the quantity of natural gas consumed as the regression coefficient is both small in absolute value and statistically non-significant. In contrast, the coefficient estimated for homes sold between 1977 and 1981 was larger in absolute value and statistically significant. Consumption of an additional hundred cubic feet of natural gas diminished a home's market value by $15.84 This is probably a conservative estimate of the effect of gas consumption as the thermal value of some homes was improved over time so that latter buyers had a wider variety of thermal efficiencies to choose from compared to buyers in the early 1970's.[2] The increased importance of natural gas consumption in the latter period relative to the early 1970's may have reflected not only heightened awareness of escalating energy costs but also expectations of increasingly higher costs.

Energy Influential Characteristics

The implicit values of most of the structural features included in the model affecting the homes thermal efficiency changed over the two time periods as predicted in Hypothesis 2. The imputed value of each story increased over the period by nearly $900. This may reflect the reduced energy needed per square foot of living space required in multiple versus single story homes, but it may also reflect increased preferences for multiple story homes due to other factors as well. The slight drop may reflect increasing fuel bills, declining family size or other factors.

The other energy influential characteristics tend to inflate energy consumption. The changes in the hedonic prices of all of these features except air conditioning confirmed the second hypothesis also, as the hedonic prices of house size, age, pool, and fireplace all declined in the latter 1970's or became statistically nonsignificant. Of course, while energy costs may have affected the change in preferences for these items, other factors may also have influenced the change.

Mortgage Interest Rates

The statistically significant coefficients indicated that mortgage interest rate variations had a positive effect on the price of housing in both time periods, confirming Hypothesis 3. However, this effect was one and a half times larger after 1976 than prior to that time; mortgage interest rates raised sale price by $1801 and $2795 in the first and second time periods, respectively. The positive sign of the coefficient probably reflects the dominant influence of consumers' inflationary expectations that existed throughout the 1970's.

School Quality

In both periods the coefficients of the pupil/teacher ratio differed significantly from zero indicating that this indication of school quality was perceived by and important to buyers and sellers. The absolute value of the coefficient doubled over the period. Thus supporting the fourth hypothesis. Prior to 1977 a one unit increase in pupils per teacher reduced sale price by $1061 and by $2601 after 1976. In 1971 the pupil/teacher ratio in these schools ranged between 18 and 23; Columbus City School's ratio was 21. By 1980 the Columbus system's ratio was 29 while the average for suburban schools was 24 and the minimum was 19. The widening disparity between schools' student-pupil ratios and the imposition of busing in the city schools probably both contributed to the perceived change in quality of schools over the time period and thus the increased value to buyers in the latter 1970's.

Neighborhood and Location Attributes

Income of neighborhood residents, proxying for aesthetic quality is a statistically significant determinant in both periods but declined in value over time. A $1,000 difference in resident income between two census districts resulted in a $740 difference in sale price pre-1977 but only a $560 difference afterward. Aesthetics, though still valued, seem to have become less important relative to economic and social issues.

Distance to the central business district (CBD) also declined in value in the second period. A house located 1 mile from the CBD garnered an extra $5,770 prior to 1977 but $4,581 afterward. This may have demonstrated a concern about rising gasoline prices.

DISCUSSION

The results of this analysis indicate that consumers changed their valuations of housing attributes to reflect the rising energy costs of the 1970's. Consumers did not account for the home's natural gas consumption prior to 1977 but paid more for houses with lower consumption after 1976. This evidence may encourage additional investment in energy conserving structural features as well as behavioral changes that conserve energy. Of course, in order for the capitalization to occur information about the energy consumption or thermal efficiency needs to be provided to potential buyers. This work shows that in lieu of an energy labelling program sellers who have improved the efficiency of their homes may have saved utility bills to demonstrate reductions to buyers.

Housing prices were sensitive to increasing energy costs not only through the value of direct consumption but also in the imputed prices of the structural features affecting both natural gas and electricity consumption. More energy efficient, multiple-story houses, increased in value compared with one-story homes. While the hedonic prices of fireplaces and pools, among other energy consuming features, decreased between the time periods.

The measures used in this study cannot determine precisely how much of the change in the feature's hedonic price reflected the increasing cost of energy. However it is likely that the changes were at least partially attributable to increasing costs as well as changes in preferences for aesthetics and other attributes, since the changes tended to follow the directions hypothesized based on energy costs alone. Consumers interested in the investment as well as consumption value of the home have an incentive to select houses with features that tend to increase in value over time and to improve the thermal integrity of the energy consumptive features if possible.

The sensitivity of sale prices to mortgage rate increases was hardly surprising. However, the size of the windfall gain to owners of existing housing was interesting. The gains may be a partial consequence of consumers migrating from other large cities where housing prices and expected rates of increase tend to exceed those in Columbus. The equity earned elsewhere would allow a robust demand even in a time of high interest rates.

Not only were housing prices sensitive to economic changes but also to perceived changes in school quality. Parents appear to have perceived the widening disparities of school quality among the school systems studied, as reflected in pupils per teacher.

FOOTNOTES

[1] For more information concerning comparison of the sample with the Columbus, Ohio SMSA, see Longstreth (1981).

[2] Consumption in 1973 and 1978 is correlated, $r = .93$, $p \leq .0001$. Movers are unlikely to invest in conservation unless they are aware of capitalization.

Appendix A

List of Independent Variables[a]

Characteristic and Variable	Source[b]	Definition
HEATING EFFICIENCY		
Natural Gas	CGOH	ccf of natural gas used for heating in 1973
STRUCTURAL CHARACTERISTICS		
Living area	FCAO	Interior living area of house in square feet
Stories of living area	OARDC	Number of stories (floors) of living space
Fireplace	OARDC	Dummy indicating presence of at least one fireplace
House age	FCAO	Age of house at time of sale in years
Garage	FCAO	Number of closed garage spaces
Air conditioning	FCAO	Dummy indicating presence of central air conditioning
Family room	FCAO	Dummy indicating presence of a recreation or family room
Swimming pool	FCAO	Dummy indicating presence of an in-ground swimming pool
Bathrooms	OARDC	Number of bathrooms
LOT CHARACTERISTICS		
Lot area	FCAO	Size of lot in square feet
NEIGHBORHOOD CHARACTERISTICS		
Income[c]	BOC	Median income of residents in census tract
ACCESSIBILITY CHARACTERISTICS		
Distance from CBD	FCBBC	Straight-line distance to CBD in miles
PUBLIC SERVICE CHARACTERISTICS		
Pupil/teacher ratio	ODED1	Average teacher/pupil rate of public school system
ECONOMIC CONDITIONS		
Mortgage rates	BFSL	Average annual interest rates on residential mortgages charged by one savings & loan assn. in Columbus, Ohio

[a] Dependent variable is total sales price of house in 1980 dollars. Mean sales price was $51,976.95 with a standard deviation of $23,109.13 when adjusted to 1980 dollars. Source was Columbus Board of Realtors, Multiple Listing Service, Columbus, Ohio and Deed Office, Franklin County, Ohio.

[b] Sources are OARDC = Ohio Agricultural Research and Development Center, The School of Home Economics, College of Agriculture and Home Economics, Department of Home Management and Housing, Project Hatch 570, Energy Questionnaire 1978. CGOH = Colombia Gas of Ohio, Consumption data for 5000 addresses, 1973. FCAO = Franklin County, Ohio, Assessor's Office. Individual Residential Property Appraisal Records, 1972-1978. BOC = U.S. Department of Commerce, 1970 Census of Population and Housing, Social and Economics Statistics Administration, Bureau of the Commissioners, Franklin County Highway Map, Cletus E. McPherson, County Engineer, Columbus, Ohio, 1978. ODED1 = Ohio Department of Education, Division of School Finance, Total Employees and Classroom Teachers per 1000 pupils, 1970 to 1980. BFSL = Buckeye Federal Savings and Loan Assn., Average Annual Mortgage Interest Rates, 1971 to 1980, Columbus, Ohio.

[c] Expressed in 1980 dollars

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APPLIED RESEARCH ON A CLASSICAL CONDITIONING MODEL OF CREDIT CARD FACILITATED SPENDING

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ABSTRACT

It is proposed that instrumental acts of spending with credit cards leads to the classical conditioning of credit card stimuli with the spending response. As a result, the mere presence of credit card stimuli should direct spending. As predicted, the amount spent in an applied laboratory setting and the probability and amount spent in an actual spending situation were facilitated by the presence of credit card stimuli.

From their introduction in the early part of this century, credit cards have become a significant factor in economic and social policy (the definitive history of credit cards has yet to be written although some partial histories exist - 10, 13, 14, 19). Today there are close to 600 million credit cards in circulation with an average family having five cards and a monthly balance equal to 15% of monthly income. It is projected that by the mid 1980's credit card transactions will dominate all transactions (15, 16). Credit cards have thus become an essential feature of our mercantile system accounting for a significant proportion of sales and allowing businesses to sell more goods and services to a wider range of individuals (5). Additionally, credit card operations in and of themselves can result in substantial profit (6). At the time of their inception credit cards simply facilitated commerce. Today, they have become a vital component of business.

As they have become an indispensable aspect of business and banking, so too they have become vital to the maintenance of individual's standard of living. Credit cards provide a convenient means of transaction and facilitate management of household accounts. All in all, credit cards have become an indispensable aspect of personal money management, business and banking. Maybe more significantly, credit cards are believed to be the precursor to a new economic and social order characterized by a cashless medium of exchange (11, 19).

Yet the prominence of credit cards has also generated serious problems. Credit abuse is a widespread problem of social and economic concern. As a major source of retail and bank loss, credit card abuse, default and fraud affect consumers who must pay higher prices to offset the loss (22). By representing money which may not exist widespread credit use is believed to fuel inflation. More importantly, individual debt entanglement is a shattering experience affecting facets of an individual's personal and social life. Debt entanglement has been found to be associated with loss of self-esteem, unemployment, marital stress, and a range of physical and psychological disorders (4, 21). The importance, value and problems associated with the responsible and irresponsible use of credit cards necessitates a thorough understanding of the manner in which individuals come to use or abuse them.

Behavioral research on credit cards has been mainly descriptive, centering on the development of profiles of users and nonusers. Who is the user? - age, education, socioeconomic status, etc. (e.g., 18). How do attitudes relate to credit card use (e.g., 1)? While the descriptive behavioral work and other research directed at exploring broader economic issues (e.g., the use of credit cards under various rates of interest - 19) are of interest and value, empirical and theoretical analyses that are drawn from basic principles of individual psychology can better promote understanding of antecedents and consequences of individual credit card use.

The apparent enhancement of spending with credit cards is the characteristic of credit cards of primary concern in the research reported here. Retailers and credit card researchers (2, 12) generally believe that people spend more with credit cards. Indeed, there is a range of descriptive data to support this: consumers report that they spend more with credit cards (3), credit card use is related to higher per purchase spending (12). Extant explanations of this facilitation are based either on laws of economics or common sense: debt is increasingly socially acceptable (7), use of credit cards lowers subsequent risk of use of credit cards (23), or it is simply a convenient and a painless way to spend (12). However, the correlational nature of these studies does not make it clear whether it is the credit card which causes spending or whether higher spenders gravitate toward credit card use. It is suggested here that through experience and use, credit cards acquire the capacity to elicit spending behavior. A simple learning model is proposed to explain the process whereby consumers come to spend in a relatively automatic fashion simply by virtue of their being in the presence of credit cards cues.

As an individual learns to perform a response that is instrumental in securing a reward, stimuli associated with the instrumental response gain the capacity to elicit that response and such stimuli also gain the capacity to elicit the affective reactions surrounding the response and induced by the reward (20). This process is termed classical conditioning. Spending may be conceived as an instrumental response that is reinforced by the positive affect generated by the acquisition of goods. This research is based on the proposition that components of the spending response and the affective response to the reward of spending become classically conditioned to stimulu associated with the act of spending and that such stimuli become directive for further spending. Consequently, as an individual instrumentally spends with credit cards or in the presence of credit card stimuli (e.g., advertisements for the credit cards and/or announcements that the credit cards are accepted), the credit card stimuli gain the capacity, as a result of classical conditioning, to affect the magnitude of subsequent spending responses; individuals may be more likely to spend, spend more, or more quickly in the presence of credit card cues.

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The results of several studies have been consistent with this model (8, 9). Simulated spending has been facilitated in the presence of credit card stimuli. In one study, subjects estimated the amount they would spend for various consumer items with the presence and absence of credit card stimuli varied. As predicted subjects indicated that they would spend more per item when credit card stimuli were present. In a second experiment subjects, ostensibly involved in an unrelated matter, were interrupted and asked to estimate the amount they would contribute to charity. The presence and absence of credit card stimuli was varied. As predicted, subjects indicated a higher estimate of donation when doing so in the presence of credit card stimuli.

The elegant simplicity of this previous research shows clearly that as stipulated in the classical conditioning model, the presence of credit card stimuli enhances the magnitude of simulated spending. That is, credit card stimuli, having no instrumental purpose for the experimental task, was found to facilitate the magnitude of estimated spending. However, in an attempt to control the experimental situation to the extent needed to establish interpretable cause and effect relationships between credit card stimuli and spending, realism was of necessity sacrificed. The first experiment reported here is designed to provide evidence regarding the impact of the presence of credit card stimuli on actual spending behavior. The design of this study complements the one in which subjects estimated the donation to a charity. While in that experiment subjects were asked to estimate their contribution to a charity with the presence of credit card stimuli being varied, in this study subjects were asked to make an actual donation to a charity with the presence of credit card stimuli varied. It was predicted that the presence of credit card stimuli would increase the actual donation to a charity.

In a second study tipping of cash and credit card customers was observed in a restaurant. It was predicted that for equivalent checks, credit card tips would be greater than cash tips. Credit card stimuli, present while a credit card customer is paying the check, will increase the size of tip.

The experiments reported were designed to test a classical conditioning model of credit card use in an applied manner. The model predicts that through a conditioning process the presence of credit card stimuli enhances spending behavior.

EXPERIMENT 1

Subjects

The subjects were thirty undergraduates. They were run in individual testing sessions and randomly assigned to one of two experimental conditions - credit card stimuli present or absent.

Procedure

Subjects were ostensibly participating in an experiment of "impression formation". Ten minutes into reading short descriptions of various individuals and answering various questions, a stranger (actually an experimental confederate) entered, approached the subject and indicated that the "United Way" was collecting door to door across campus. Subjects were asked to make a donation to the charity. Following the donation the confederate exited and the subject completed the masking task. The credit card stimuli consisted of MasterCard insignia (determined in a pilot study to be the most recognized) and regular and large size replicas of actual MasterCard cards. The stimuli were placed in the upper right hand corner of the subject's table. Permission to use the "United Way" name was obtained from the local United Way director and actual money collected was contributed.

Results

The amount of money donated by subjects was the dependent variable of interest. Consistent with the results of previous studies in which spending was simulated, in this experiment subjects actually contributed significantly more in the presence of credit card stimuli, $\underline{F}$ (1,28) = 12.9, $\underline{p}<.01$. Of the fifteen subjects in each group, thirteen contributed in the presence of credit card stimuli, (average donation $.36) while only five contributed when credit card stimuli were not present (average donation $.11). Thus as predicted from the classical conditioning model, and consistent with an identical study which showed estimated donation to a charity to be facilitated by the presence of credit card stimuli (9), actual donation to a charity was increased in the presence of credit card stimuli.

EXPERIMENT 2

In an attempt to control the experimental situation to the extent needed to establish interpretable cause and effect relationships between credit card stimuli and actual spending, realism has of necessity still been sacrificed. The operation of the predicted causal relationship between credit card stimuli and spending was viewed in the context of a laboratory experiment using college students as subjects. Experiment 2 was designed to provide field evidence regarding the impact of the presence of actual credit card stimuli on actual spending behavior of adults. In this experiment tips of cash and credit card customers of a restaurant were recorded. It was predicted that as credit card stimuli are present when paying with a credit card, the presence of credit card stimuli would enhance the actual percentage of tip received by the waiter or waitress for equivalent checks.

Procedure

With the cooperation of a local restaurant 135 customers were observed over the period of one week. Party size, check amount, mode of payment and amount of tip were recorded by the waiters and waitresses. A random sample of credit card receipts indicated 100% accuracy in recording of check size and tip.

Results

The dependent measure of interest is the tip. A 2 (whether the person paid by cash or charge card) X 4 (amount of check divided into quartiles) Analysis of Variance indicated that when credit card stimuli were present subjects left a significantly higher percentage of tip, *F* (1,127) = 4.48, *p*=.03. Table 1 indicates clearly that at each level of check size individuals paying with credit cards left a larger tip. Overall, the tip when the check and tip were left with credit cards was an average of 16.95% of the check and when left in cash only 14.95%.

Table 1. Mean Tip as a Function of Check Size and Payment Mode.

		Level of Check[1]			
		1 ($1[illegible].00)	2 ($23.00)	3 ($31.00)	4 ($47.00)
Mode of Payment	Credit card	$3.03(17.8)[2]	$3.92(17.1)	$4.91(15.8)	$8.04(17.11)
	Cash	$2.36(13.9)	$3.60(15.6)	$4.64(14.9)	$7.23(15.4)

[1] Amount of check was divided into quartiles. Amount in parenthesis represents the median within that quartile.

[2] Average percentage of check

DISCUSSION

The experiments show that, as stipulated in a classical conditioning model, the presence of credit card stimuli enhances the magnitude of actual spending. This is true in both the real life setting of a restaurant and a controlled setting in the laboratory. Thus while people may actually spend with credit cards because of the ease of transaction an unanticipated consequence may be that credit card stimuli may acquire the ability to elicit spending behavior as a reflexive, classically conditioned response. The presence of credit card stimuli may facilitate spending.

The proposed model and studies directly address the recognized facilitative nature of credit card spending. Alternative systems of payment may differ in important economic and social characteristics and exert significant influence on individual consumer behavior. The need to understand the antecedents and consequences of credit card use is necessitated by the need to create more effective and satisfied consumers of credit, make clearer and more effective government regulation in this area, and address remedies to the serious physical and psychological consequences that result from debt entanglement. By casting the issue of credit card facilitation within the framework of a relatively well understood learning process, further empirical laws regarding credit card use and effects may be derived and tested.

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CONSUMER EDUCATION WORKSHOP II: PANEL ON CERTIFICATION

Moderator: William D. Rader, Ohio University

STATE CERTIFICATION REQUIREMENTS FOR CONSUMER EDUCATION TEACHERS

David Graf, Northern Illinois University

Consumer science can be more properly termed consumer education or consumer economics. Consumer subjects are widely taught and often mandated in the States. However, states rarely require special undergraduate training or certification to be able to teach consumer subjects.

Letters were sent to certification agents in each of the 50 states. They were asked to specify the requirements necessary for secondary teachers to be able to teach such subjects as "consumer education," "consumer economics," "personal economics," or "personal finance." Responses were received from certification agents in each of the 50 states.

Courses dealing mainly with consumer science topics were most often titled consumer education or consumer economics. A number of other secondary courses include elements of consumer topics. Some of the most common of the courses which include consumer elements are economics, free enterprise, and personal finance.

Even though there are teachers who are responsible for an entire daily schedule of consumer subjects, they are rare. Typically, a teacher is responsible for two sections of a consumer course. This may be a course primarily devoted to consumer science or a course which contains elements of consumer science. Whether they deal with consumer science on a large or small scale, most secondary teachers in the United States are not specifically trained or certified in this field.

The 50 state certification agents were asked whether specific undergraduate courses were necessary to teach consumer science subjects in their states. Nine certification agents stated that coursework in economics was required to teach consumer science. All nine listed Social Studies teachers as qualified as long as they were prepared in economics. Six of the agents listed business education teachers and one listed home economics teachers as certified as long as they were prepared in economics.

Thirteen of the certification agents stated that as long as the teacher was prepared in a specific discipline on the undergraduate level they were automatically prepared to teach consumer science. Many of these states listed more than one discipline as being qualified to teach consumer science subjects. These stated do not include a specific undergraduate consumer course requirement as part of the preparation. Eight of these thirteen states listed Home Economics or Vocational Home Economics, seven listed Business Education, and six listed Social Studies as the discipline qualified to teach consumer science in their states.

From the secondary school point of view, little or no formal coursework is required by state certification boards to teach consumer science courses. Eighteen of the certification agents replied that their states required no coursework in consumer science to be qualified to teach it. These states included Alaska, Colorado, Connecticut, Delaware, Florida, Kansas, Maine, Maryland, Massachusetts, Minnesota, Montana, Nebraska, North Carolina, South Carolina, Utah, Vermont, Washington, and Wyoming.

Nine states require persons teaching in the area of consumer education/economics to have formal coursework. Arizona (Vocational Home Economics), Illinois, Indiana (Home Economics), Missouri (Business Education), Oregon, Texas (Vocational Home Economics), and Virginia (Vocational Home Economics) were states that had some form of regulation of this nature.

Four states issued specific certificates or endorsements to be able to teach consumer science subjects. This was true in Georgia (Mathematics, Business Education, Home Economics and Social Science), Michigan (Vocational Home Economics), Tennessee (Business Education, Home Economics and Social Studies), West Virginia (Business Education).

As we move into an era of greater self sufficiency, the teacher of consumer science will need a broader preparation than even the one course which may be specified in a few states. Shopping decisions, consumer rights and responsibilities, values and goals, and personal finance topics traditionally taught must be expanded. Technology, career changes, investing, political action and economic principles will have to be incorporated into the consumer program at the secondary level. This means that the secondary consumer science teacher, regardless of base discipline, should have training in political science, economics, computer literacy, and some insight into the business world.

Following the above presentation, a specific case was examined. The process involved in changing certification requirements in Missouri is discussed with application made to existing consumer education certification requirements. Two state department of education officers delivered this presentation.

MISSOURI TEACHER CERTIFICATION

Turner Tyson and Paula Harzfield
Department of Education, State of Missouri

In the past decade (1973-83), the professional certification for public school teachers has been an active issue for Missouri educators. Activities on this particular issue have been positive in nature. The Teacher Education and Certification Advisory Committee (TECAC), established in 1974, initiated a process of reviewing and updating requirements for major certification areas and levels. Action by TECAC via the State Board of Education resulted in significant certification revisions.

a. In 1978, the State Board adopted recommendations by TECAC that revised elementary standards and created certification for Early Childhood and Middle School teachers. The new elementary measures became effective in September, 1982 and increased emphasis on reading preparation.

b. In 1979, the State Board accepted revisions for all secondary certification areas. Those changes will take place September, 1984. Secondary teachers will be required to take additional clinical experiences.

c. In 1981, the State Board adopted revised standards for ten special education categories to become effective in 1986.

d. A recommendation now before the State Board would implement significant changes in certification of school administrators. This proposal which would be effective in 1985, would discontinue "life" certificates for principals and superintendents and five-year and ten-year certificates would be issued.

There are specified, organized procedures for recommending changes in teacher certification or proposing new areas for certification. Suggestions for future changes usually originate through the various professional and subject matter organizations. Such proposals would then be delivered to the TECAC for consideration. If the committee agrees that changes might be desirable, it will ask the Commissioner to appoint an ad hoc committee to study the proposal and make recommendations back to the full committee. These ad hoc groups consistent mainly of people with an expertise in the area to be examined, but may also include principals, superintendents, and teacher educators. For example, the ad hoc committee that worked on special education revisions had twenty members representing various interest groups in special education as well as parents and local school board members. Committees are currently reviewing standards for Special Services Personnel and Non-Academic Vocational certificates.

Recommendations prepared by various committees are presented to the TECAC for discussion and action by the chairman of the ad hoc group. Proposals accepted by the state-wide advisory committee are presented to the State Board of Education for formal review and approval. The State Board has accepted every recommendation made by TECAC except for two minor changes.

Subject matter areas which teach consumer education classes include social studies, mathematics, business, and home economics. In Missouri, vocational consumer homemaking programs must teach a consumer education semester class plus include consumer education concepts into all the other home economics classes taught.

Under current certification requirements in Missouri, a person must complete seven hours of home management and consumer education in order to receive secondary consumer and homemaking education certification. Under the revised requirements, which will become effective September 1, 1984, six semester hours of consumer education and resource management must be completed. At least one course in consumer education and one course in resource management are required.

Current business certification does not require the completion of any consumer related course, however the new requirements will require completion of 2-4 hours of business or consumer related law.

Mathematics current and revised certification requirements do not specify completion of any consumer related course. The closest consumer related course requirement for social studies certification is a 3 hour economics course.

In the past five years, the major thrust in teacher certification has been toward improvement of the quality of the professional personnel in Missouri schools. Toward this end, the State Board, the Commissioner, and TECAC developed a four part approach.

a. Effective in 1982, all persons certified to teach in Missouri must have an overall 2.5 grade point average. This requirement was viewed as a positive step toward insuring the quality of prospective teachers.

b. After July, 1983, students entering teacher education programs must attain established cut-off scores on recognized national tests. This is an effort to insure that quality people enter teacher preparation.

c. In November, 1982, the State Board initiated a process for reviewing the teacher education programs at Missouri colleges and universities. This approval process lists categories of performance standards for teacher preparation programs.

d. For several years, the State Board has backed legislation that would eliminate the "life" teaching certificate in Missouri.

Missouri is one of only three or five states that still issues life certificates. It seems quite impractical that a twenty-one year old should be granted a certificate and expect to teach thirty years with no or little professional development. Teaching is a public sector occupation and it appears that more and more the people interested in education are anxious that school teachers keep up to date with educational trends and practices. The elimination of the life certificate is a high priority with several key legislators as well as the current Governor.

The impetus for requesting stronger certification requirement in Oregon for teachers of Consumer Ed has been brewing for several years and the Teachers' Standards and Practices Commission is currently considering competency testing for all teachers. Past experience in Oregon shown by a 1979 survey and a follow-up survey in 1981 found over one-third of Consumer Education teachers were teaching the subject for the first time. This high turnover ratio could be attributed to several factors: (1) teachers in the larger school districts were being reassigned, in some cases, every semester (2) Oregon rules allow administrators to misassign teachers two periods a day.

In conversation with Marian Kienzle, State Department Personal Finance Specialist, and other Consumer Educators around the state, it became apparent that Personal Finance was being used as a "dumping ground," in some cases, to create a position for a coach or to give a full work load to a teacher with an unfilled work day. Consequently, Personal Finance classes in these situations developed a "Mickey Mouse" reputation. Teachers with little or no background in Personal Finance didn't know what do do with the class or what to teach. Kids became bored, teachers became frustrated, administrators reassigned them and the cycle continued. In one Oregon high school, the entire Personal Finance Department was eliminated. Those teachers were placed in other classes and teachers from other departments were given the Personal Finance responsibility! In a large Oregon school district, the current president of OACE was temporarily riffed last fall and when rehired was not given a Personal Finance teaching assignment.

A survey just completed in Oregon found that 55% of those currently teaching Personal Finance have had no Personal Finance since college and a whopping 35% had no preparation in college for teaching Personal Finance.

In order for us to have continuity in our Personal Finance program and to upgrade the teaching of it we need to reduce the large turnover rate of Personal Finance teachers. In Oregon, we feel the best way to do this is by having tougher certification requirements for teachers of Personal Finance. We feel we cannot ask for a change in the misassignment rule because it would pose too much of a problem for small school districts where their schedules are more inflexible and staffs are usually small, but we can ask for qualified people in the classroom.

Following this presentation, the university perspective was examined. Carole Vickers, a professor of home economics at Marshall University, presented her remarks in what is fundamentally an outline form.

CONSUMER EDUCATION SESSION II: PANEL ON CERTIFICATION PERSPECTIVE OF A UNIVERSITY PROFESSOR

Carole Vickers, Marshall University

After much vacillation, I've settled on the following approaches: (1) some basic assumptions; (2) advantages of certification (3) disadvantages; and (4) identification of central concepts as I see them. My perspective is that of a college professor/department chair of a 10,000 student university in a state whose population is 1.8 million. Consumer education should be one of a secondary school students curriculum options.

Basic Assumptions

1. No one with a bachelor's degree in a traditional teaching field can adequately teach the content.
2. There is general agreement the central concepts that are included in the consumer education configuration.

Advantages

1. It will improve the quality of teaching of consumer education.
2. It will legitimize the content as an academically acceptable component of the curriculum.
3. It will satisfactorily resolve the question of "ownership" of the curriculum -- otherwise "ownership" will be established by administrative fiat.

Disadvantages

1. There is no basic ground swell to add the certification possibility; in fact, there is probably greater pressure to reassign existing teachers desplaced by decreased school populations -- (cause or effect).
2. The market for teachers is limited, unless consumer education becomes a second endorsement.
3. Unless accreditation bodies and LEA's support certification, the whole question is academic.
4. Competition for credit hours in colleges of education is great.
5. Extensive revision of existing course configurations in colleges and universities is necessary to optimize the learning of students.
6. Development of an adequate philosophical base for consumer education is a complex process.

Let me, if you will, approach the process of a certification option in consumer education as a college professor, (quasi) administrator and former secondary school teacher. I would recommend the following:

Renewable certificates are simply a demonstration by public teachers of an acceptance of responsibility for producing effective instruction for Missouri school children. It seems incomprehensible that given the vast explosion of knowledge in our modern society, a teacher would be able to stay educationally current without some program of professional renewal or development. The best example of this is our developing computer society. It appears that computers will impact every aspect of education and it could be quite necessary for teachers to attain additional knowledge in this expanding area. Curriculum techniques and methods in education are simply not static. Instructional Management Systems is a current educational movement of widespread attention in Missouri. It is quite conceivable that much professional development is necessary in this area.

There is a somewhat valid point that a suggested eight hours of credit or the equivalent might prove a financial hardship for a school teacher. Many teachers are not paid well in Missouri and some people feel that the elimination of the life certificate should be directly tied to demands for increased salaries. At this point in time, this may not be a political or fiscal reality. Nonetheless it is time to increase the professional aspect of teaching by eliminating the life certificate. A directly related financial consideration is the fact that most Missouri district salary scales are based upon seniority and additional college credits. Teachers wishing to advance on the salary scale must pick up college hours.

Eliminating the life certificate simply enhances the profession by promoting updated professional development and may serve to improve the image of the school teacher in the eyes of the Missouri taxpayer.

Following the presentation, a more specific example of consumer education in Oregon was delineated by consumer education teacher Charles Peterson. It establishes a case for certification requirements for Oregon teachers of "personal finance."

THE DEVELOPMENT OF CONSUMER EDUCATION/ECONOMICS IN OREGON

Charles Peterson, Pine Eagle High School,
Halfway, Oregon

1968 A statewide advisory committee was appointed by the Board of Education concerning consumer education. This committee developed a "Personal Finance Education Guide," pilot tested, monitored and printed a revised guide.

1969 Consumer literacy was identified as one of seven critical areas for high school graduates.

1970 A department of education survey of grades 7-12 discovered only 10 percent of the student population (2% male) was enrolled in Consumer education.

1972 The department of education revised high school graduation requirements to include one unit (130 hours of instruction) of credit with minimum competencies related to Personal Finance education to be required for 1978 graduation.

1974 A Personal Finance cadre of teachers was selected and trained to provide inservice instruction and assist in developing materials.

1975-1976 Pilot testing of minimum standards for elementary and secondary schools, final revisions and adoption by the State Board of Education were completed.

1976 A combined endorsement was recommended for certification of teachers of Personal Finance by a group of educators representing most aspects of education.

1977 The Teachers' Standards and Practices Commission formed 5 subcommittees to consider certification rule modification based on input to these subcommittees, TSPC did not give an endorsement but did include as a general studies requirement, one hour of credit in Consumer education/economics/personal finance of all prospective teachers.

1977 Oregon Association of Consumer Education was formed with membership from business and education.

1980 The State Department of Education added Economics as a graduation requirement to be included in Personal Finance effective with the class of 1984.

1981 OACE conducted a statewide survey of those teaching Personal Finance in Oregon.

A revised Personal Finance Guide was published and distributed.

A Personal Finance Test Item bank relating to competencies was created and pilot tested.

1983 A Consumer Education/Economics Guide was printed.

A request was made to TSPC to require a combined teaching endorsement for teachers of Business Education, Social Studies, Home Economics and Mathematics. This endorsement would require 15 quarter hours (maximum of 6 quarter hours in any of the categories listed below)

(1) Economics
(2) Consumer problems, issues and institutions
(3) Personal Finance
(4) Consumer Math
(5) Methods, materials and resurces in Consumer Education

1. Endorsement as a second field for four reasons:
    a. it makes individuals less nervous
    b. it increases employement opportunities
    c. it is feasible for student to complete
    d. as long as certification of teachers is mandatory, teachers can increase their employability with additional endorsements.

2. Development of the endorsement as a conceptualization of teacher competencies rather than a collection of existing courses.

    There is general agreement on the concepts which are included in secondary consumer education programs; help is available.

3. Begin the certification at the middle school and/or secondary level. My experience has been that K-12 certification patterns have heavy credit hour requirements. Also, the acceptance of a specialized professional in consumer education will be greater.

On balance, I favor the specific endorsement of consumer education teachers. It would enhance the teaching and ultimately benefit students.

CAREERS IN CONSUMER ECONOMICS -- FINANCIAL SERVICES

Rosella Bannister, Eastern Michigan University[1]

ABSTRACT

Careers in consumer affairs in financial services are expected to grow in the 1980s, especially in the area of expert advising in personal financial decisionmaking. A closer link is needed between on-the-job expectations in consumer affairs and academic preparation for employment in the financial services industry.

In 1982, the National Bank of Detroit funded a study to provide recommendations regarding the consumer affairs function within the financial services industry. In addition, the study focused on knowledge and skills appropriate to consumer affairs and the role of higher education in academic preparation and continuing education. A report of the study is available from the Michigan Consumer Education Center, Eastern Michigan University, Ypsilanti, MI 48197.

EMPLOYMENT OPPORTUNITIES

In response to the rapidly changing financial services marketplace of the 1980s brought about by increased competition, deregulation, technology and the growing complexity of consumer choice, financial institutions are expected to offer employment to men and women who have knowledge and skills in consumer affairs. Applicants with a personal finance background are likely to be in greatest demand.

A 1981 study commissioned by the American Banker's Association suggests that there will be a growing market for the services of expert advisors in personal financial decisionmaking, and that the critical consumer financial issue of the 1980s is, and will continue to be, effective money management.

Consumer affairs professionals are employed at a variety of levels in banks, credit unions, savings and loan institutions, investment and insurance companies, and other businesses which provide financial services to consumers.

While the number of senior level position in consumer affairs at corporate headquarters will remain relatively small, the following entry level and career ladder positions may be open to consumer affairs graduates:

- support staff in the consumer affairs department
- positions in advertising, marketing, public relations and community affairs
- positions with direct customer contact such as new account managers, consumer credit, customer service and branch managers
- positions in the growing area of financial advising, with job titles of financial consultants, financial counselors and financial planners.

Consumer affairs executives are often recruited from within the company's own personnel, and consumer affairs graduates with corporate experience in a variety of areas should be qualified candidates for senior level consumer positions.

CONSUMER AFFAIRS FUNCTION

Coordination of consumer affairs is often cited as a major reason for placing a corporate consumer affairs specialist at the senior management level. The function at this level is to strengthen the consumer sensitivity of the financial institution through monitoring and analyzing consumer trends and issues, evaluating corporate consumer products, services and policies, and providing consumer information and education on topics of mutual interest to the industry and its customers. Key responsibilities can be classified as follows:

Evaluation

1. Monitor and analyze consumer trends and issues related to the financial services industry.
2. Analyze customer inquiries and complaints and recommend appropriate action.
3. Evaluate corporate products, products and services in view of consumer trends and issues.

Communication and Counsel

1. Facilitate communication within the financial institution regarding consumer issues and concerns.
2. Maintain liaison with consumer leaders and facilitate communication between the financial institution and consumer networks.
3. Advise management in shaping and evaluating the financial institution's consumer products, services and policies.

Information and Education Programs

1. Provide consumer and economic education programs and materials to employees, customers and other audiences.
2. Assist other departments in the development of customer information and education programs and materials.
3. Encourage and support consumer and economic education in elementary and secondary schools, and in adult, continuing and higher education.

While this study did not analyze the key responsibilities of the consumer financial advisor, the function is to provide assistance to clients in identifying and analyzing their financial goals, resources and cash flow, and to provide recommendations regarding insurance, investments, tax and estate planning.

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[1] Director, Michigan Consumer Education Center

KNOWLEDGE AND SKILLS

Based on the key responsibilities identified above, the following knowledge and skill areas are suggested for a consumer affairs specialist:

Consumer Perspective

- Sensitivity to factors affecting consumer decisions at individual, family and societal levels.
- Functional knowledge of consumer behavior as influenced by individual and family financial values, goals, needs, wants and concerns.
- Ability to view consumer needs and concerns in relation to business interests and responsibilities.

Business Perspective

- Knowledge of business principles and procedures appropriate to financial institutions, including:
    - profit motive
    - product planning
    - consumer services
    - marketing
    - advertising
    - public relations
    - business ethics
    - corporate social accountability
- Specialized and technical knowledge of the financial institution's products and services available to consumers.
- Ability to view corporate objectives and policies in relation to consumer needs and concerns.

Personal Finance

- Functional knowledge of the components of personal financial management over the lifecycle, including:
    - resources
    - recordkeeping
    - saving
    - borrowing
    - investing
    - protecting
    - taxpaying
    - estate planning
    - evaluating financial decisions
- Awareness of the impact of technological advances on personal financial management.
- Knowledge of laws affecting personal financial decision making.
- Functional knowledge of factors to be considered when making decisions about the purchase of consumer products and services, including housing, transportation and financial services.

Economic System

- An understanding of the production, distribution and consumption of goods and services within the mixed economy of the United States.
- Knowledge of economic concepts important to business-consumer relations:
    - scarcity
    - supply and demand
    - price
    - competition
    - monetary policy
    - fiscal policy
- Awareness of the effect of economic problems on consumers:
    - inflation
    - unemployment
    - interdependency
    - public policy toward business
    - economic growth
    - balance of trade

Political System

- Awareness of the structure and functions of government and those forces which influence public policy.
- Knowledge of the legislative and regulatory processes which affect business-consumer relations.
- Ability to analyze the costs and benefits of government regulation and consumer protection laws for consumer and for the financial services industry.
- Understanding of the effects of fiscal and monetary decisions on households and financial institutions.

Communication

- Skills in listening, writing, editing and speaking.
- Functional use of basic electronic media.
- Awareness of the complex interactions between institutions and individuals in areas of conflict resolution, mediating, interdependence and compromise.
- Ability to apply communication skills when working with advisory and focus groups.

Management

- Skills in decision making, problem solving and issue management.
- Ability to think independently, analytically, objectively.
- Ability to develop and implement reasonable goals, objectives, standards of performance and action plans within given time constraints.

Information Processing

- Skill in conducting survey research and analyzing statistics.
- Ability to apply data processing principles.
- Skill in computer operations as related to business-consumer affairs.

Interpersonal Relations

- Skill in teamwork, group planning and decision making.
- Ability to create a climate of cooperation, mediation, compromise and conflict resolution.
- Skills in assertiveness, persuasion, tolerance and negotiation.
- Ability to deal with agressiveness in others.
- Sensitivity to the special needs of various constituent groups within society.

Teaching and Learning

- Ability to plan, implement and evaluate teaching and learning activities for use in meetings, classrooms, workshops, conferences.
- Ability to develop, use and evaluate educational resources including brochures, pamphlets, newsletters, films, and video cassettes.

MULTIPLE RESPONSE DATA FROM HOUSEHOLDS: WHEN TO COLLECT IT; WHAT TO DO WITH IT

Nancy M. Rudd, The Ohio State University[1]
Joel Rudd, University of New Hampshire[2]

The purpose of this roundtable was to generate discussion regarding the costs and benefits of collecting data from more than one household member. In the past wives have served as the primary spokesperson for households because they were most likely to be available and willing to cooperate. Recognition that wives' responses to surveys may differ from those of other family members has led, in part, to collection of data from more than one household member. However, collection of such data entails considerable added cost. The number of households which can be surveyed is reduced, limiting generalizability. Generalizability is further reduced to the extent that only certain kinds of households agree to cooperate in such surveys. In addition, analytical tools appropriate to taking advantage of the multiple respondent nature of the data may be unavailable or unsuitable. Therefore, collection of such data may be justified in only a small number of cases.

Discussion among roundtable participants focused on two overlapping questions: 1) what kinds of variables can be measured at the household level and how can they be measured? 2) under what circumstances is some measure which reflects the household as a whole necessary and when are data from more than one household member necessary to obtain such a measure?

Objective household characteristics such as income, net worth, and value of total food consumption are usually household level variables. While individual household members may report different values for such variables, a researcher would generally not have any means of determining which values were correct. Thus collection of data from the household member identified as most knowledgeable on the subject of interest would provide better data at less cost than collection from more than one household member.

Subjective variables--attitudes, perceptions, satisfactions--are individual level variables. There was agreement that responses of this nature cannot simply be added or averaged to generate a meaningful "household" variable. There was disagreement as to whether household members could yield a single response (e.g. satisfaction with income) representing the household if interviewed jointly. A common means of generating a "household" variable from two or more household members' responses is to compute a difference score. However, the difference between two measures that each contain some unreliability may contain even more unreliability. Thus creation of valid and reliable "household" variables from individual responses is very difficult.

That difficulty notwithstanding, participants agreed that there are instances in which a particular research question cannot be answered without multiple respondent data. Most examples given involved questions regarding the effect of agreement or disagreement between spouses on some phenomenon e.g. money management to some subsequent outcome such as level of savings. In contrast, if the researcher were primarily interested in the effect of spousal disagreement on a single member's behavior, attitudes, etc. then that person's perception of disagreement (a single respondent measure) would be more appropriate than a measure of actual disagreement (requiring two respondents).

No conclusions were reached with regard to the issues discussed. The roundtable served to increase awareness of the hazards involved in collecting data from multiple household members in the absence of a clear theoretical rationale and plan for analysis.

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[1] Associate Professor

[2] Assistant Professor

INTERNATIONAL PERSPECTIVES ON THE IMPACT OF CONSUMER RESEARCH ON NATIONAL POLICIES

Jean Kinsey, University of Minnesota
Omer Baybars Tek, Dokuz Eylul Universitesi, Turkey

ROUNDTABLE B.

Attending: Mohamed Abdel-Ghany, Robert Kerton, Gordon Bivens, Ann Foster, Kristine Kline, Karen McAlexander, Carolyn Hudson, Charles Cavagnaro, Howard Schutz

Dr. Tek suggested we discuss this topic by separating macro from micro consumer issues, the latter being concerned with everyday, individual and relatively short-run problems including product testing and health and safety issues. Under macro considerations are the aggregate problems of hunger and poverty, general economic development, consumer exploitation, and income distribution.

Some mechanism for sharing research results and information about products (hazardous and otherwise) is sorely needed on an international scale. Even recognizing cross cultural differences, it was agreed that individual researchers, manufacturers and responsible governments should make every effort to disseminate (new) knowledge in the interest of: (a) preventing waste through duplicate research efforts, and (b) enhancing the health and safety of people everywhere. Perhaps academic researchers could be more socially responsible by "marketing" their findings to audiences beyond the readers of academic journals.

There was a discussion of a Model Consumer Protection Code being promoted by IOCU and the U.N. This led to a lengthy discussion about the problems of disseminating product information in foreign countries. The "government model" works well when a country has a government structure which is both willing and able to receive and disseminate information to consumers. If, however, such a government does not exist, or if its motivations are otherwise directed, or if the population is largely illiterate, the "government model" does not work. There exists an important and difficult question about how far the U.S. government can and should go towards ensuring that foreign consumers are fully informed about products imported from the U.S. We can hardly dictate the information policies and actions of foreign governments. However, it was pointed out that we could protect foreign consumers by refusing to export known hazardous products.

Focusing more precisely on the topic of the round table, it was suggested that an international sharing of research techniques and methodologies is of primary importance. A wide variety of types of research can potentially be important to national policy. For example, a survey of consumer's tastes and preferences and household production technology preceding the introduction of new foods into an undeveloped country may predetermine the probability of success or failure of many food aid policies. Research on institution building in undeveloped countries might also have a special relevance for the consumer movement.

Occasionally, policymakers request or even fund research that will provide them with information needed for intelligent policy decisions. In these cases the role of research in policymaking is clear even though the outcome may be obtuse. Most research projects are potentially useful for policymaking, but it is often incumbent on the researcher to ask what consumer policies his/her research findings might impact. Having identified this, it is then socially responsible to condense and forward those findings to the appropriate policymakers and to our colleagues around the world.

THE EMERGING INFORMATION TECHNOLOGIES:
WILL CONSUMER ECONOMISTS MISS THE BIT?

Jill Rader Hayes and Anne Swartzlander, The Ohio State University[1]

PURPOSE

The purpose of the roundtable discussion was to provide a brief overview of the critical issues and problems created by the information technologies, to encourage an in-depth discussion of those issues most salient to consumer economists, and to stimulate an exchange of ideas about appropriate action and avenues for consumer economists to initiate regarding the new technologies.

INTRODUCTION

Those innovations most frequently cited as monumental change-agents in our society are the emerging information technologies: telematics, videotex, computers, computer networks, information utilities, interactive cable television, teleconferencing, direct broadcast satellite (DBS), high definition television (HDTV), lowpowered television (LPTV), interactive videodisc, and video cassette recorders (VCR). These technologies bring a deluge of issues and problems including: control, communications policy, the work/leisure interface, global transborder data flow, privacy, security, distribution of channels/spectrum space, human/machine interface, electronic participatory democracy, technological literacy, information rich/poor and enhanced targeted persuasion techniques. The literature is saturated with authorities who predict the information technologies will initiate sweeping social changes greater than the automobile, steam engine, printing press or even the clock.

National and multinational corporations have taken a competitive research and development approach to the diffusion and formation of the new systems. Their focus appears to be fixed on examining what will facilitate the adoption process of the innovations which has been operationalized as "what will motivate consumers to purchase the system/service."

Unlike other governments that have implemented long-range social planning and funded research in this area, the United States government has taken a "hands off" policy. The long-term societal effects have not been sufficiently confronted; therefore, adequate long-range goals and long-range planning do not exist in the United States.

Of the research that has been conducted in this country about home information systems, little is available for public examination. This situation is understandable, considering the great expenses for the corporations involved; however, since these innovations are predicted to have an enormous impact not only on our society, but on a global level as well, contributions from *all* available sources and disciplines is critical for facilitating any form of long-range planning or accurate overviews, as well as for providing sorely missing inputs and guidelines for public policy issues.

A FEW CRITICAL QUESTIONS

As part of the roundtable discussion the following "Bytes for Thought" were circulated to encourage an in-depth discussion of those issues most salient to consumer economists:

-What social/cultural effects (values, literacy, high tech anxiety, human-machine interface) follow from the changes in information technologies?
-What are the privacy issues involved?
-What are the advantages and disadvantages of electronic transactions for consumers?
-What are the equity issues in access to information (haves and have nots)?
-How will the public good characteristics of information affect public/private production and dissemination of information?
-How can the quality of information be judged? Who is responsible for the content and reliability of information?
-What is information?
-What changes will occur in the consumer information environment (infomercials, advertising on demand, electronic shopping, narrowcasting, local information).
-How will employment and productivity be affected?
-What are the implications of participatory democracy?
-What are the risks associated with society's dependence on information systems?
-How can we familiarize consumers with the new technologies so they can signal their needs and concerns?

COMMENTS

Feedback information suggested that the primary concerns of this group were focused on questions regarding the quality of information, equal access to information, and privacy issues. Public policy formation, information provision, research and consumer education were the most often mentioned directions for professional involvement.

One of the topics discussed was the potential role of consumer economists and educators in providing much needed relevant consumer information. Another noteworthy suggestion which evolved out of the discussion was the need for a long range, future-oriented perspective and emphasis in examining the total impact of information technologies on consumers and society.

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[1] Graduate Associates

CONSUMER DECISION-MAKING

Virginia Clark, The Pennsylvania State University[1]
Cecelia Thompson, The University of Hawaii[2]

ABSTRACT

Decision-making is the overarching management concept in consumer education. The models of decision-making provide a means for learners to become successful consumers.

Consumer education is about how individuals can make better choices, and making these choices involves management. Experts in family management have established many approaches to decision-making. All involve identifying and weighing alternatives and selecting the alternative which best meets the needs of the individuals involved. Each approach can be appropriate in certain circumstances and/or for certain individuals.

Four examples of methods for arriving at decisions include the Consumer Decision-Making Model (3); The Value Reasoning Model (4); the Planning Process (1); and the Issues Approach (2).

The Consumer Decision-Making Model is geared to reaching one's highest level of satisfaction. It involves learning about and using cost-benefit analysis to evaluate alternatives and rank them according to their expected net benefit. There are seven steps in this approach:

1. Define the problem and outline some potential solutions;
2. Determine how one's values, goals, and standards may limit one's choices;
3. Seek advice and collect information on the alternatives;
4. Weigh the costs and benefits of alternatives; include time as well as money costs;
5. Make a choice, or postpone a decision until one can clarify steps 1-4;
6. Evaluate and periodically review all major decisions; and
7. Be responsible for one's decisions.

Value Reasoning is a process that deals with practical problems--what to do about...or what to do regarding. The objectives of this process are to help make rational judgments and to provide a method for resolving conflicts. The steps in Value Reasoning are:

1. Identify concerns;
2. Set your goals;
3. Form a plan;
4. Act; and
5. Follow up.

The planning process can be used as an individual or group approach to decision making. Steps in the process include identifying concerns; setting a goal; forming a plan; and following up on the action taken to carry out the plan.

The Issues Approach offers a method for digging beneath the surface of a situation and identifying the real issue. There are six steps in this process:

1. Define the issues;
2. Identify the interested parties;
3. Gather perspectives;
4. Analyze viewpoints;
5. Form a position; and
6. Make an action plan.

Each of these methods contains elements which are similar or identical. For example, in each the beginning step requires identification of the problem, issue, value or concern. Following steps require varied procedures for identification of alternative solutions and/or approaches to the issue. Action using the selected approach is also included in each process.

All of the processes deal with concepts important in management; values, goals, resources, decision-making, and the consideration of the environment and the impact of environmental components, such as individuals, organizations, families and roles as individuals, on one another.

Use of these approaches, or others which are similar is an important aspect of any program in Consumer Education or Home Economics. Consciously and/or unconsciously most educators make use of them constantly.

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UNDERGRADUATE AND GRADUATE PROGRAMS FOR CAREERS IN FAMILY FINANCIAL COUNSELING

Panel Discussion organized by Jerry Mason[1] and Virginia Langrehr[1], Brigham Young University

A NEW LOOK AT TRAINING FINANCIAL COUNSELORS: A SELF-INSTRUCTIONAL MODEL

E. Thomas Garman[2], Virginia Polytechnic Institute and State University

Financial counseling is an idea whose time has finally come! A fortunate byproduct of this nation's two recent recessions has been the increased attention focused upon financial counseling. Simultaneously, there exists among academics a growing interest in how to train those interested in careers in financial counseling.

A model for self-instruction follows a time-honored prescription for successful efforts: awareness of interest, commitment, information search, serious study, practice, and evaluation. One begins with an "awareness of interest" in the field (developing a counseling skill, knowing about a specific financial problem). Next comes a "commitment" to action where one makes up his/her mind that a serious interest exists which needs satisfying. The "information search" often is particularly difficult since this field is only about twenty years old, however, some suggested references are noted below. "Serious study" of information materials leads the self-learner to the next step of practice which may involve on-the-job training or a supervised internship. The final step is evaluation which ideally is conducted by the learner along with a well qualified professional who is usually a financial counseling peer or an academic.

It is a simple model usable for improving education in financial counseling. It can be used in traditional academic settings, in in-service group sessions and in committed self-study efforts. The "Achilles heel" of the model, however, is the process of information search. To resolve that dilemma, dozens of readings could be recommended. Today I note five of significant value: "Developing a Personal Approach to Financial Counseling," "Building Basic Financial Counseling Skills," (both published at Virginia Tech), "The Family in Today's Money World" by Feldman, "Guidelines to Financial Counseling" by Williams, and the Ontario "Manual for Credit Counselors." This bare-minimum library of materials will help those interested in self-instruction in financial counseling.

GRADUATE CERTIFICATE PROGRAM IN BUDGET AND FAMILY CREDIT COUNSELING

Helen E. (Dickin) Mau[3], San Francisco State Univ.

This program, initiated in the fall, 1982, is a 17 unit interdisciplinary competency-based program requiring 30 specified undergraduate prerequisite units or their equivalents. The program is designed to educate counselors, adult educators and prospective managers or organizations providing budget and/or consumer credit counseling services.

This program's development was stimulated in 1980 by a request from the executive board of the Consumer Credit Counselors of California following 5 years of mutual cooperation with the Department. This program was developed as a graduate level certificate program to strengthen the quality and productivity of serious debt and budget counseling services.

Major reasons for the choice of a graduate level certificate program are:

.the potential graduate will be screened in the same manner as applicants for the M.A.

.important competencies can be developed more adequately i.e. interviewing skills; adult leadership skills; abilities to negotiate and to speak persuasively with leaders in business, board members, and personnel in collection agencies, to initiate legislation, to appreciate and evaluate input from research, and to experience functioning in a variety of roles and responsibilities as an intern;

.cumulating graduate level internship is possible since there is a prerequisite undergraduate field experience;

.interdisciplinary support of the program exists as coursework from four other departments is approved among the prerequisites and in the graduate program i.e. accounting/finance, adult education, counseling and speech/communications.

.research is encouraged as 13-16 more units, including a thesis, enable achievement of a M.A.

.the program has the qualities essential to qualify its graduates as certified "Family Financial Counselors" by the National Foundation for Consumer Credit (NFCC). The Department's application for this status was the first in the nation to be approved by the National Foundation for Consumer Credit in June 1982.

FAMILY FINANCIAL PLANNING AND COUNSELING -- THE BRIGHAM YOUNG UNIVERSITY MODEL

Jerry Mason[1], Brigham Young University

Clearly the need exists for both financial counselors and planners, and this need is expected to become even greater in the near future. The challenge lies in recognizing the unique contribution of each profession and in adequately training individuals for distinctly different careers in planning or counseling. Although there are similarities in the training of planners and counselors as both require an indepth understanding of personal finance, the planner needs to develop a high degree of competency in dealing with personal risk management, capital accumulation, income taxation, retirement planning and estate transfer. The financial counselor should take courses in family systems theory, personality development, and marital and family interaction. It is essential that the financial counselor be adequately trained in effective intervention techniques so as to be able to bring about beneficial changes in the client's behavior.

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[1] Asst. Professors, Department of Family Sciences

[2] Prof., Dept. Housing, Int. Design and Res. Mgt.

[3] Prof., Dept. Consumer and Family Studies/Dietetics

The major in Family Financial Planning and Counseling at Brigham Young University builds on the similarities of the two distinct professions with courses in risk management, consumer credit, investments, taxation, and financial analysis. All students also take courses in family interaction, interviewing skills and counseling. The unique combination of Family Resource Management, Family Life Education and Marriage and Family Therapy within one department makes possible the team teaching of some courses. Thus the combination of faculty with training in several disciplines within the Department and the structure of the curriculum has made possible a program that produces approximately 35-40 majors a year in Family Financial Counseling and Planning.

As a result of their unique training, students have found a broad market for their skills. Many have gone on to obtain certification as financial planners. Quite a few have secured positions with financial planning firms; many have established their own businesses. Fewer have found job opportunities as financial counselors, although we expect that more of them will pursue job opportunities in this expanding field.

PROFESSIONAL COMPETENCIES FOR THE CAREER OF FINANCIAL COUNSELING BASED ON PRINCIPLES OF RESOURCE MANAGEMENT, CURRENT PROBLEMS OF CLIENTS AND RESULTS OF EMPIRICAL SURVEY RESEARCH

Flora L. Williams[4], Purdue University

Professionals in financial counseling who teach principles of resource management, who are aware of the real problems of clients, and who keep current with knowledge of alternatives and research will be recognized for their contribution for improving the quality of life. Financial counseling is emerging as a career in which professionals can give hope to clients who have resource constraints, economic uncertainty, and difficult decisions. Financial counseling based on principles of resource management helps clients to reevaluate the use of resources and fulfill basic needs whenever there is a crisis or a change in circumstances or goals.

Financial counseling, as opposed to financial planning, has a comprehensive approach to reevaluating use of resources to obtain economic well-being of individuals and families. One of the most important competencies of the financial counselor is to help clients to change consumption patterns or life styles. This is facilitated when counseling skills are merged with resource management principles.

The curriculum for the option of financial counseling at Purdue University was developed on these theoretical bases. The purposes of the financial counseling course is to integrate theory with field practice. It is designed to synthesize knowledge obtained in previous courses, acquire knowledge unique to financial counseling, and to apply this knowledge. Currently, 14 models of financial counseling are examined in this course. The option prepares financial counselors to work with clients from low, middle, and high income families.

A CONSUMER PROGRAM FOR ARMY FAMILIES

Nancy Nolf[5], Military District of Washington, Fort Myer, Virginia

The Military District of Washington Consumer Affairs Program is a comprehensive effort composed of five interdependent components including: consumer education, consumer advocacy, information and referral, program outreach and financial counseling. Much of the work done by the consumer affairs staff is consumer education. Currently, this includes bimonthly consumer education workshops for enlisted wives, a weekly consumer education course for incoming personnel E-1 to E-4, and training programs for commanders and units.

Advocacy for the service member in the military environment takes several forms. One is assisting consumers in negotiating through the complex web of military regulations that can govern and control a service member's life as a consumer as well as a soldier. We also serve as the "consumer voice" in a number of onpost committees and councils. Information and referral services are made available through our consumer education resource center which is a small library where materials and information are collected, cataloged, and made available.

The financial counseling service includes assistance in managing consumer credit and debt; purchasing consumer goods and services; and developing skills in family budgeting and recordkeeping. We assist clients in managing repayment plans and also mediate with client's creditors on an as-needed basis. Clients are counseled and assisted in working through and understanding the consumer decision making process. Through these services they are encouraged to exercise their consumer rights to analyze, question and ask for redress. They are supported as they play active roles in changing the system when it is not responding to their needs.

The five components of the Army Community Services system are interdependent. We strive to maintain a holistic, balanced approach to meeting clients needs.

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[4] Assoc. Prof. Dept. of Consumer Sci. and Retailing

[5] Consumer Affairs Coord., Army Community Services

RESEARCH METHODOLOGIES FOR CONSUMER POLICY ANALYSIS: ROUNDTABLE DISCUSSION

W. Keith Bryant, Cornell University[1]
R.O. Herrmann, Pennsylvania State University[2]

Discussion of research methodologies for consumer policy analysis dwelt on three aspects: the types of policy research, sources for models of policy evaluation research, and available data bases for policy research. For typologies and models, two citations were given:

Phillips, L.W. and B.J. Calder. "Evaluating Consumer Protection Programs, Parts I and II," *Journal of Consumer Affairs*, 13(2):157-186 and 14(1):9-36.

Campbell, D. and J. Stanley. *Experimental and Quasi-Experimental Designs for Research*, Chicago, Rand McNally, 1966.

Three points came out of the discussion on data sources. The Inter-University Consortium, located at the University of Michigan, has a large accessible archive of data sets. Random telephone surveys probably are the cheapest current consumer survey technique. It is sometimes possible to add a few questions to a national consumer survey quite cheaply.

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[1] Professor, Consumer Economics and Housing.

[2] Professor, Agricultural Economics.

USING MICROCOMPUTERS IN CONSUMER EDUCATION

Gerald A. Bird, Virginia Tech[1]

THE PERSONAL COMPUTER

Until rather recently, faculty teaching in colleges and universities or in the Cooperative Extension Service had rather limited access to computers. The available main-frame computers were powerful, but not generally suitable for utilization in most classroom teaching-learning situations. Thus, the computer was not generally available to students or Extension clientele.

During the 1970s, technological advances made possible the microcomputer, which has become known as a personal computer. During the past six years, several million personal computers have been purchased for use in the home, business, education, and by Cooperative Extension.

USING THE COMPUTER

The participants in this roundtable session and other consumer educators contacted prior to the session, indicated extensive use of the personal computer in their work. Some examples of computer programs used are listed with the institution in which they are used:

Iowa State University

Cooperative Extension has adapted programs, formerly used on main-frame-computers, for Apple micros. "Dollar Stretcher" is used primarily to help newly unemployed families adjust their spending to their new situation. After the program is run, the client receives the output of the program, pamphlets, and one-to-one counseling. Another program which calculates the costs of owning and operating a car is used with a learn-at-home course, Money Mechanics.

Texas Cooperative Extension

A variety of computers able to utilize the CP/M operating system are being purchased. One of the first programs developed figures the costs of a loan and prints a loan amortization table.

Kansas State University

TRS-80 and Osborne computers are being used in several courses. The Home Management Laboratory is based entirely around the microcomputer, beginning with learning word processing. Other assignments include accounting, evaluating a budget program, a group decision-making simulation, and a management simulation, "The Family Resource Game." Four programs were used as part of another course to (1) analyze the family food budget, (2) show the effect of inflation on future purchases, (3) analyze resources for retirement, and (4) to analyze family spending. Finally, in another course, students have an option of writing a computer program or modifying an existing program.

University of Missouri

Resident instruction and Cooperative Extension are working together on instructional programs for Apple and IBM computers. The program "Life Insurance Planning" is used in a financial counseling class to determine the amount of life insurance needed. "How Much House Can You Afford?" is used in class as a demonstration, with input from the students to illustrate a variety of financing situations. "NOWACCT" assists in comparing the services and charges of NOW accounts and will compute the average balance. Programs are in development to (1) calculate the cost of raising a child and (2) analyze budgets for use by financial Counselors.

TRENDS

Several identifiable trends were evident from the session. Personal computers are being utilized in the teaching-learning process in higher education and Cooperative Extension in the form of: hands-on experiences, demonstration of methods and techniques, and analysis of personal finances.

Main-frame computers are being supplanted by microcomputers as teaching tools because they are relatively inexpensive, transportable, and capable of running many types of programs. In addition, students being trained for careers in family economics, home management, and consumer studies will be using computers, especially personal computers in their work. Thus, it is important that students learn to use and become comfortable with computers as a part of their program of study.

Finally, Cooperative Extension appears to be moving to the use of personal computers to better serve their clientele, for the reasons stated above.

PARTICIPANTS

Participants in the roundtable session were: Sheran Cramer, Cynthia E. Crawford, Mary Dee Dickerson, Donna L. Dismukes, H. D. Drennan, Jim Evans, Cindy Needles Fletcher, Sue Alexander Greninger, Marta Ma Guevara-Umana, Jamey Hatch, Beverly Henderson, Letta W. Jasper, Joan Kinney, Laurene Larson, Frances Cogle Lawrence, Judy A. Lazzaro, Stewart Lee, Mary Jane Shumard, Pat Tengel, Natalie Thomas, Louise Wesswick, Janet M. Wilson, and Janet C. Wolf.

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[1] Assistant Professor Family Economics

THE ROLE OF CONSUMER AND FAMILY FINANCE COURSES IN FAMILY STUDIES AND HUMAN SERVICES PROGRAMS

Jean M. Lown, Utah State University[1]

ABSTRACT

Most academic programs in family studies and human service professions do not require any courses in consumer studies or family finance. This roundtable group discussed strategies to encourage the faculty directing these programs to require consumer and family finance courses in their curricula and to facilitate greater interaction with the program faculty.

With the changing and uncertain economy complicating family resource management decisions, human service professionals and family counselors need to be educated to help families avoid or cope with financial problems. Financial problems are among the top contributors to marital discord and divorce, yet few family counselors or social workers are trained in the principles of family financial management. Although these professionals counsel families with financial problems on a regular basis, they often lack knowledge of family finance and consumer principles. The American Association for Marriage and Family Therapy (AAMFT), the major accrediting authority for family therapists, does not require any courses in family finance. How can professionals deal with the whole spectrum of family problems if they ignore this crucial component?

> Problems of families do not fit conveniently into narrow categories or disciplines. The allocation of a resource to solve one household problem leads to or affects other decisions within the family environment. The family must be studied as a whole system because its components are nonseparable; that is, it is a system that cannot be reduced to the sum of its parts. If the quality of family life is to be changed or improved, we must find ways to deal with all aspects of family life in terms of the interactions and the relationships between the parts. [1, p. 10]

Roundtable participants discussed strategies to encourage more interaction among professionals in these related disciplines and to encourage colleagues teaching family studies and social work to require consumer studies and family finance courses in their curricula. We need to encourage AAMFT to require training in financial counseling. Potential benefits will accrue to faculty, students, and the public we serve.

The following strategies to achieve these objectives were discussed.

1. Get to know your colleagues in related disciplines. Discuss your concerns related to students' educational backgrounds and let them know your areas of expertise.
2. Invite family studies and social work faculty and community professionals to speak to your classes. Besides fostering professional and town-gown relationships, their contributions can substantially enhance the learning experience for students.
3. Make your expertise known to the community. Offer to do workshops on money management or aspects of consumer education for community groups, social workers and other professional organizations.
4. Offer evening and extension courses to attract adult students who may be professionals in related fields. Their expertise can enhance the academic experience for students as well as build professional relationships.
5. Develop and team teach courses with social work and family studies faculty such as introduction to financial counseling.
6. Encourage consumer and family finance students to take courses in social work and family studies and vice versa.
7. Join and be active in related professional associations such as the National Council on Family Relations and invite colleagues to join ACCI.

By building bridges with colleagues and community based professionals, fostering student interaction, and participating in related professional activities we can accomplish a number of objectives:

- provide valuable cross disciplinary educational experience for our students.
- increase awareness of the importance of our academic programs among our colleagues.
- bolster student enrollment in our courses and programs.
- provide essential training in money management and consumer education to human service professionals.
- encourage interdisciplinary research and related professional activities.
- foster professional growth and development.

It is time to be more aggressive in promoting our academic programs and professional expertise. Practicing family counselors and academic program advisors cannot meet the financial counseling needs of their clients without adequate training and preparation. We can offer then the opportunities to obtain this preparation or we can suggest that they refer clients with money problems to skilled financial counselors.

REFERENCE

Horn, Marilyn J. and Nickols, Sharon Y. "Interdisciplinary Research: Have We Lost Our Focus?" Home Economics Research Journal, Sept. 1981, 11:9-14.

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[1] Assistant Professor, Home Economics & Consumer Ed.

FILMS AND THE REDUCTION OF ECONOMIC ILLITERACY

Ray D. Bernardi, Southern Illinois University--Edwardsville[1]

ABSTRACT

Audio-visual instructional materials being produced today for the classroom teacher are available in practically every discipline. Economic education is very fortunate to have the Joint Council on Economic Education which has taken the initiative to produce a new film series in economic education. Called Give & Take, the series of films consists of twelve 15-minute programs in personal economics for grades eight, nine, and ten.

Evidence collected recently has proven, without a doubt, that young people today are highly oriented toward learning from films (or what is the same thing, video presentations). Film is rapidly becoming in the twentieth century what the popular low-priced pamphlet was in the seventeenth century --an important influential vehicle by which "special pleaders" (Schumpeter's term) bring their case before the public (3, p. 1105). Educators should recognize this phenomena and take advantage of its pedagogical importance. There is an ancient Chinese proverb that says, "Tell me, I forget; show me, I remember; involve me, I understand." With films, the teacher has enabled students to reach the second level of learning. It may be true that a picture is worth a thousand words. Look, listen, and learn are the watch words when using educational films.

There are delicate reasons why schools may be reluctant to take on economic education (1, p. 331). However, the so-called "dismal science" may turn out to be one of the most relevant courses in the curriculum, provided that modern teaching techniques designed to maintain student interest are utilized. The "Theory Y" teacher who believes that students enjoy learning under favorable conditions will find films to be an excellent source of learning material.

NEW FILMS AVAILABLE--*GIVE AND TAKE*

Several agencies have been quite active in producing quality educational materials over the years. In fact, with very little effort, the teacher can find more educational resources than they have time to sift through. Good films may be difficult to find. The Joint Council on Economic Education recently produced a new film series that may be just what many teachers are looking for. Developed for students in grades eight, nine, and ten, Give & Take programs dramatize problem-solving situations that show students how economic concepts--such as opportunity costs, supply and demand, and taxation--relate to their daily lives. The series is intended for use in consumer education, economics, business education, home economics, social studies, and other classes where personal economics material is presented.

Teenagers are active participants in our economy. They are consumers forming a large market for many products and services. They are producers, working at full- or part-time jobs. Teens are also at a stage in their lives where they must make important decisions: Shall I drop out of school? What career shall I pursue? How active a citizen do I wish to be? These are decisions that have long-term implications for the individual's economic well-being and for the economy as a whole (2, p. 3).

Give and Take was developed by the Joint Council on Economic Education, the Canadian Foundation for Economic Education, and the Agency for Instructional Television, in conjunction with a consortium of 45 education agencies in the United States and Canada. Additional support was received from 24 corporations and foundations and from the Office of Consumer's Education, U.S. Department of Education. Actual production was under the supervision of AIT, JCEE, and CFEE by the Educational Film Center (EFC), North Springfield, Virginia; Bradshaw, MacLeod & Associates Ltd. in association with ACCESS (Alberta Educational Communications Corporation), Calgary; and The Film Works in association with TVOntario, Toronto, Canada.

Each lesson in the series consists of a 15-minute television/film program with teacher's guide materials to provide ideas for classroom introduction and follow-up. Each program dramatizes personal economic problems relevant to the daily lives of young people. Teenagers are "stars" of each program, but special visuals are used in some programs to emphasize selected economic concepts. Some programs end with a question to provide stimulation for class discussion. Other programs depict the characters arriving at their own best solutions (2, p. 3). High school age actors were used because junior high students are likely to attach more importance to the message being presented than if students their own age were used.[2]

The guide materials for each lesson include a Commentary, designed to provide additional theory background for the teacher, and Suggestions for Classroom Use. The Commentary consists of explanations of the main concepts in the program and a vocabulary list with definitions.

Nine of the twelve programs have Student Handouts accompanying the lessons. These handouts are designed to build thinking skills and to personalize the lesson. The handouts encourage follow-up classroom discussion; there may be more than one correct answer to a problem or activity.

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[1] Associate Professor of Business Education

[2] Interview with John Clow, JCEE Liaison for the production of the Give & Take film series, Kansas City, Missouri, March 18, 1983.

Although there is a logical sequence to the programs, each is specifically designed to stand alone so that they can be used in any order. No prior knowledge of economics is needed, although students familiar with Trade-Offs,[3] a film series for ten- to thirteen-year-olds, should be able to analyze the problems in a more advanced manner.

The programs may be ordered from the Agency for Instructional Television, Box A, Bloomington, Indiana 47402; telephone (812) 339-2203. The complete series is available to all educational agencies which participated in their development. Therefore, if your state participated, you will have free access to the master tapes which you can acquire and have copied in your school district. Contact the AIT to find out whether your state participated.

As soon as your district has acquired the series, please request that a Center for Economic Education near you provide a workshop to orient teachers in how to effectively use them. A special Give & Take Workshop Leader's Handbook has been developed that is loaded with training materials which will help teachers make maximum use of the films.

SUMMARY

Good teachers are constantly looking for innovative and interesting ways to present subject matter to their students. Filmmakers have demonstrated the power of their medium to transmit scientific information about the economy in an interesting and accurate manner (3, p. 1013). Economists and teachers have innovated with graphical presentations throughout history and there is every reason to believe that they will continue, as they have been doing, to utilize the visual potential of film as well.

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[1]Economic Education Experiences of Enterprising Teachers, Joint Council on Economic Education, in Education USA, June 30, 1980, p. 331.

[2]Freeman, Vera (principal guide writer). A Guide to Give & Take. Bloomington, Indiana: Agency for Instructional Television, 1982.

[3]Moss, Laurence S. "Film and the Transmission of Economic Knowledge: A Report." Journal of Economic Literature, 1979, 9.

[4]Popham, Estelle L., Adele F. Schrag, and Linda Blockus. A Teaching-Learning System for Business Education. New York: Gregg Division, McGraw-Hill Book Company, 1975.

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[3] A 15-film series in economic education developed and produced in 1978 by the same group which created Give & Take.

ROUNDTABLE: PATIENT EDUCATION ACTIVITIES FOR PRESCRIPTION DRUGS

Margaret Charters, Ph.D. and Ina Sue Brown, Syracuse University

There is increasing public concern about the lack of effective dialogue between patients and health professionals about prescription drugs. Fifty percent of all prescriptions filled are not taken correctly. In December 1981, a FDA plan to test patient package inserts for ten prescription drugs was rescinded. It was held that the private sector could implement a voluntary plan more economically and efficiently.

The purpose of this roundtable convened one year later was to evaluate private sector initiatives in prescription drug patient education activities.

Two national groups are providing leadership in this area. The Committee on Patient Education (COPE) was appointed in January 1982. Chaired by FDA Commissioner Hayes, its members are FDA bureau administrators. Its charge is to "coordinate government efforts to educate consumers about prescription drugs and to serve as a catalyst for private sector initiatives in this area." It has a Patient Education Resource Center (PERC) and sponsors research to provide baseline data on the present state of consumer prescription drug information. It has initiated a public service advertising campaign. The National Council on Patient Information and Education (NCPIE) met first in October 1982 chaired by Paul Rogers. This is a private consortium of health care providers, consumers, industry and others committed to communicating prescription drug information to patients.

Communication between patients and health care professionals for quality health care requires work on three fronts:

First, patient education materials and activities must be available in usable and useful form. Participants reviewed a display of materials obtained from 67 pharmaceutical companies, medical, pharmacy and other organizations. Categories were: disease discussion only; general discussion with space for specific physician instruction; medication scheduling assistance; patient "how to take" information with specific drug information for the physician only; mini-package which combined general disease information and specific information for related drugs for the patient; patient package inserts and patient medication information for individual drugs; comprehensive programs of patient medication information such as that of the U.S. Pharmacopaiea, Pharmex, American Association of Retired Persons, and the American Medical Association; education materials from the Elder Ed program of the University of Maryland; new technology and media materials including PSA's, advertisements and hot lines.

The review of new materials reflected major investments in patient education materials. A broad range of usefulness and usability was exhibited. The readability levels of PMI's varied from grade 5.66 to 14.

Second, the information and materials available must be distributed. This is very limited. Studies show 35% of patients still get no drug information from physicians or their office; only 37% get oral information from their pharmacist. Only 6% of consumers receive written information from their physicians; 14% from their pharmacists. A survey of physicians in Syracuse, New York, in March 1983, revealed that only 8.6% of doctors in the area were using the American Medical Association PMI program. AARP includes material in all mail order drug prescriptions.

Third and finally, materials must be used. Studies show that only 2-4% of patients request information from their doctors or pharmacists. There is a long way to go.

Quality health care requires that medication be properly taken and administered. All sectors must cooperate. Consumer involvement has been lacking in the mix. Roundtable members made the following recommendations:

(1) Increase involvement of consumer professionals, as part of the private sector, to help open up communication between patients and health care professionals. They have tended to delegate responsibility to FDA for this function. (2) Expand patient advisory councils for medical centers by cooperation between medical and consumer organizations. (3) Promote cooperation of pharmaceutical companies and consumer professionals to field test patient education materials. (4) Educate consumers to ask for information to contribute to the quality of their care. This could change the dynamics of medicine and provide the incentive for physicians to provide education, lead to increased instruction in patient communication in medical schools and perhaps even affect the criteria for medical school admission. (5) Increase representation of consumer organizations in NCPIE through the membership of ACCI and additional consumer groups. (6) Explore media other than print as means of patient education and information. Continue to review readability levels of print media. (7) Examine the fine line between advertising and information from the consumer point of view.

The roundtable had representation from the pharmaceutical manufacturers' association, the medical profession and the Food and Drug Administration as well as university faculty, teachers and students in the consumer field.

INTRODUCTION TO VIDEOTEX: WHERE IT STANDS

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ABSTRACT

In recent years there has been a growing awareness of and interest in systems designed to deliver text, graphics and other information services to consumers using television or other video devices for display. This paper is designed to provide an initiatory review of this developing industry called videotex. The information presented is based on four working papers, two research projects involving interviews with some of the key participants in videotex development, analysis of various articles and reports which have been published on the topic, and the authors' personal involvement with videotex projects, seminar presentations and conferences.

INTRODUCTION AND OBJECTIVES

Videotex can be described as the generic term for a developing, interactive medium that delivers text and visual information directly to consumers. It can be used to reach either mass or tighly targeted audiences in both home and business markets. The user interacts with the system via a handheld keypad, pushbutton console, or keyboard. Desired information is retrieved by user command from one or more public/private data bases through telephone lines, cable or broadcast signals, with text and graphics displayed on a television screen or other video device.

Viewed as the product of a marriage between computer and communications technology, videotex can be aptly described as a time and space system. The concepts and services which have been advanced seem limitless and future applications appear to be hindered only by the imagination and regulatory officials.

Videotex is but one of many emerging technologies often referred to as the new electronic media. Beyond videotex, these include videocassette recorders, videodiscs, an array of futuristic applications through two-way cable television and fiber optic telephone lines, direct broadcast satellites and personal computers. The new electronic media, however, should not be viewed as containing independent or distinct forms. While in some instances they may compete with each other, for the most part the entire package of technologies should serve to supplement and reinforce one another. Indeed, to a significant extent they are interdependent.

In essence, these technologies have the capability to provide consumers with unparalleled independence and discretion over their affairs. The new electronic media provides alternatives for, or, in many cases, augments current modes of entertainment, financial transactions, shopping, work, travel, personal protection, information gathering, and communicating. In sum, the new electronic media forms a comprehensive and complex network of electronic workhorses which may provide the structure for the home of the future.

Videotex is, perhaps, the most exciting and feared of the new technologies, for it not only has the potential to replace and perform a vast array of everyday functions, but also to challenge and alter the current social, economic and political order. Most of the new technologies simply augment current lifestyles and operating systems. Videotex may act to fundamentally change them. High order change of this nature is always accompanied by fear, resistance, and, in at least some sectors of business and society, losers. The transition which futurists see occurring over the next twenty years through videotex and other, perhaps superseding technologies, will undoubtedly bring painful effects upon the vested interests of today, as well as a number of challenging questions of a moral, societal, and ethical nature.

The objective of this paper is to provide an introductory review of the videotex industry. It is specifically designed to enlighten the uninitiated student or business person on the issues, current status, and future prospects of videotex. To achieve this end, the area of concentration will not be technological. Rather, technology will be addressed only when that topic will serve to illuminate problems, conditions, or opportunities. Hopefully, after examining this study the reader will have a general framework in which to analyze and assess the prospects of this growing and dynamic field.

The remainder of the paper is organized into six basic sections. The first two sections will be devoted to an introduction to videotex and its two generic forms, teletext and viewdata. The third section will examine environmental trends which should facilitate videotex adoption. The fourth section will discuss selected issues and problems facing the industry. The fifth section will focus on the market characteristics of current and potential videotex adopters. The final section will offer the authors' concluding comments and perspectives.

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TELETEXT

Overview

Teletext is the broadcast form of videotex and refers to either one-way, non-interactive transmissions, or in its more widely viewed form, simple interactions between the user and broadcast pages. Teletext can be broadcast over virtually any medium including television signals, radio frequencies, one or two-way cable, and microwave and satellite transmissions. Due to the lack of a hard wire connection, except for cable delivered teletext, the user cannot be charged for receiving teletext transmissions; further, only pages of information can be delivered to users as there are none of the interactive capabilities required for services such as in-home shopping or banking.

Revenue streams to the broadcaster to support teletext can be gained from advertising pages, supplements to regular television advertising messages, passive advertising such as a firm's logo appearing on information pages and local/network television subsidization for public service purposes and to expand audience bases.

Teletext can be divided into at least two general categories, interval and full channel teletext. Although full channel teletext certainly has commerical potential, it is interval teletext carried over television signals which should be widely available to consumers in the shorter term. Therefore, this paper will limit its scope to include only interval teletext.[3]

Interval Teletext

Interval teletext is broadcast in "piggyback" fashion on regular television signals. This is made possible by placing (called multiplexing) the teletext page stream into the excess capacity of the television signal. All television broadcasts have this excess capacity as a portion of the television screen is left devoid of programming for technical reasons. This small unused portion of the 525 lines (in the U.S.) on the television screen is called the blanking interval -- the black bar which can be seen when the picture rolls on an improperly adjusted television set -- and it provides the vehicle for a number of interval teletext forms. Following is a description of three interval teletext applications.

Interval teletext forms include overlay, boxed and simple-interactive teletext. Overlay teletext enables the message to be layed on top of regular programming and both are viewed concurrently. Currently, the most common application for overlay teletext is closed captioning for the deaf.

Boxed teletext refers to teletext shown through a rectangular box figuratively "cut-out" of a portion, usually the lower third, of the television screen. Headline news, sports, weather and other information flows across the box, while the viewer concurrently watches regular programming. To receive overlay or boxed teletext the viewer must have a small decoder which easily attaches to the television set and which is controlled by an on/off switch.

The remainder of this interval teletext discussion will concentrate on the third form, simple-interactive teletext. Hereupon simply referred to as teletext. This form differs significantly from the two just described as the user may actively select the information he desires, as opposed to passively receiving what the broadcaster elects to send. In this case, when the decoder is turned on teletext replaces regular programming. The user must also have a small hand-held keypad, which is attached to the decoder, in order to demand desired information pages. Following is a description of the British Ceefax teletext system which currently has over 214,000 users [7, p. 16], as described by Joseph Roizen [4, p. 9].

> A viewer with a teletext receiver has a control keypad that resembles a small hand calculator. By pushing certain buttons, the viewer can command the home receiver to shut off the regular TV program on the screen and to display instead 'pages' of . . . information that is constantly updated by the TV studio. An index page (or pages) tells the viewer what information is available by page number. Selecting the appropriate page will bring the viewer such items as news headlines, sports results, weather forecasts, entertainment or shopping guides and a variety of other public interest material.

A problem exists, however, with interval teletext which primarily affects the simple-interactive form. The excess capacity of the blanking interval is small which limits the amount of information that can be delivered in a reasonable period of time. Since the pages in a teletext "magazine" are broadcast sequentially and the entire magazine page stream continuously, the greater the number of pages in a magazine leads to a longer waiting period for any one page. For the 100 page[4] magazine in the Ceefax system the average waiting period is 12.5 seconds, with the longest waiting time being 25 seconds. Therefore, even with more sophisticated decoders that contain some internal memory, it is felt by most industry participants that the upper limit is about 200 pages, with under 150 desirable to enhance user convenience.

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[3] For a review of full channel teletext see Talarzyk and Widing, "Introduction to and Issues with Videotex: Implications for Marketing" College of Administrative Science, Ohio State University Working Paper Series, WPS-14 (January, 1982).

[4] Each page or "screen" can contain about 75 words, excluding graphics.

In sum, while the user has some choice over the information he receives, the range of information available cannot compare with the depth or breadth of information in viewdata systems. Following is a brief description of selected interval teletext activities in the United States.

Teletext Activity

NBC and CBS have each begun broadcasting separate teletext magazines that should be publicly available in the Spring of 1983. Both firms are currently awaiting FCC approval for their respective broadcasts, which is expected to be granted in April, 1983.

In order for consumers to receive one or both magazines, however, the networks' local affiliates must elect to pick-up and pass-on the broadcast in their areas. Further, decoders and keypads are not yet readily available as U.S. manufacturers, until this time, have had no potential market to produce for. Therefore, CBS and NBC have begun broadcasting their respective magazines despite no available audience in order to spur the manufacturing and retailing of necessary equipment, and to encourage local affiliates to offer teletext in their areas. Decoders and keypads combined are expected to be priced under $250 at introduction. However, this is expected to drop dramatically over the next several years to a $100 to $150 price level.

The 100 page CBS magazine (NBC's is very similar) features both hard and soft news, each containing about 50 pages each. The editorial staff keeps the magazine highly current through 24 hour a day updating. The hard news section includes headline stories, business and financial news, sports reports and scores, and national weather reports. The soft portion consists of a leisure section that contains feature stories, consumer tips, games, quizzes, horoscopes, recipes and the like. It is anticipated that many local affiliates will not only pass through the national magazine to consumers, but augment it with a local teletext magazine as well. The cost to affiliates for the equipment necessary to do this ranges from $75,000 to $200,000 depending upon the desired level of sophistication. The affiliates would "round-out" the national broadcast with local news, traffic and weather reports, and so on.

KEYCOM Electronic Publishing, a jointly held concern by Field Enterprises Inc., Honeywell and Central Corporation, began broadcasting a similar magazine in November, 1982. Its 100 page National KEYFAX Teletext Magazine is carried over the blanking interval of Ted Turner's WTBS "Super Station." The total potential market for this cable delivered system is numbered at approximately 24 million households.

KEYCOM's approach to marketing, however, is greatly different than the national networks. KEYCOM will market through cable television systems both the teletext service and the keypad/decoder as a package for which the consumer is charged $19.90 per month. The hardwire connection, in-place billing and servicing departments of participating cable companys, and the equipment/magazine package approach make the subscription fee feasible. KEYCOM has set a target subscriber base for the first 30 months of operation at 200,000 households.

Teletext Potential

Teletext is well suited to provide very general information which is of wide appeal and highly time perishable. While some possibilities exist to segment markets on a fairly gross level for such variables as geographic location, time of day and channel watched, teletext is a mass market, not a focused or individualized medium. Although the broadcaster is somewhat handicapped by the page limitation problem, this drawback may turn into an asset by narrowing the scope of his activities, thereby enabling the database to be kept highly current with "least common denominator" type content at a relatively low cost.

The major barriers to diffusion at this time are the cost and availability of decoders and keypads. Loveless and Robinson report [2, p. 30] that a survey conducted by Wasatch Opinion Research Corporation indicated that with equipment priced at $50, 67 percent would purchase, 42 percent at $100, 15 percent at $250 and 4 percent at $500. This would suggest that mass market penetration would be significantly hindered by the $200 to $250 price level expected at introduction. However, anticipated price declines of 50 percent or more over the next few years would ease this problem significantly. Further, televisons are expected to be introduced within the next several years which feature a built-in teletext option for under $100. Finally, the monthly lease charge approach depicted in the KEYCOM system shall also help ease teletext into cable equipped homes.

The best estimates, therefore, are that this technology may achieve mass acceptance providing equipment costs fall to between $50 and $100, if information is tailored to exploit the medium's strengths, if standards are adopted to facilitate usage across teletext channels and systems, and if available revenue streams can be developed through creative applications. There is some question, however, as to whether teletext will survive the rush of viewdata systems which are currently emerging.

Providing teletext gets off the ground and penetrates the mass market ahead of viewdata, the consensus in the industry seems to be that teletext has enough advantages to survive. There are a number of reasons for this viewpoint. First, the level of information available through teletext may be adequate for many consumers and usage situations. Second, much of the needed equipment, already used for standard television transmission, is in place. Third, it will continue to be characterized by no or low cost (outside of the initial equipment purchase) to the user and relatively low cost to the broadcaster. Finally, the system lacks complexity, requiring little or no skill on the part of the user. Essentially, teletext serves as an extension of current viewing habits and lifestyles, as opposed to requiring some behavioral change on the part of the user. In sum, teletext should serve to complement, rather than directly compete with viewdata.

The remainder of the paper will for the most part be concerned with viewdata applications, primarily because of the far reaching implications of that medium when compared to teletext. While teletext is an important component of the new electronic media, it is viewdata which appears to promise sweeping challenges, problems, opportunities, and societal change.

VIEWDATA

Overview

Viewdata describes two-way, fully interactive systems capable of giving the user access to virtually an unlimited number of pages of information (text and graphics) and a wide array of services. The services may include in-home shopping and banking/bill paying, eletronic mail/messaging, security and other personal protection systems, games/entertainment, energy management systems, and personal computer enhancement. While information pages are used in a number of the above services, a great number of "pure" information categories may be offered as well. These may include all or portions of newspapers and magazines, restaurant reviews/menus, independent product/service reports, transportation schedules/information, encyclopedias, specialized information services, community and public interest listings, employment search, and so on.

Viewdata is far more complex and capital intensive than teletext systems. Teletext simply requires the broadcaster to organize an editorial staff to create and keep the relatively small number of broadcast pages current. Viewdata systems, depending on their width and depth of services, may require the system operator to maintain information pages reaching to the millions, as well as to organize an operation entailing possibly hundreds of independent service and information providers. The interdependencies, cost, and sheer size of the operation require a major commitment by firms with wide and varied skills.

Viewdata subscribers are connected to a system by two-way cable or telephone lines. The user demands information or services by using a keypad, terminal with keyboard, or a personal computer. A modem/decoder attached to the demand device enables the user to send and receive information over telephone or cable lines. This hard wire connection allows system operators to monitor usage and charge the consumer for content accessed in any number of ways.

System Types

Generally, there have been two types of viewdata marketing approaches, system dependent and system independent. System dependent viewdata binds the user to a particular system by packaging and marketing equipment and services together. The equipment provided would usually be compatible only with that system operators service. The user is limited, therefore, to a particular system operator's data bases and content providers. This lack of compatability may be intentional so subscribers are kept captive, or simply be the result of the fields state-of-the-art. Regardless, the offerings of a single system operator may be more than enough to satisfy many consumers. Cable based systems tend to follow this approach and some telephone based systems such as Viewtron (discussed in the "Activities" section below) have adopted it as well.

System independent viewdata enables the user to choose and, if desired, switch viewdata system operators with ease. The user need own a modem and terminal or personal computer, however, which requires a significant cash outlay, usually starting around $500 and depending upon power and optional equipment, ranging up to $6,000. Phone-based services such as those offered by CompuServe, The Source and Dow Jones are examples of system independent viewdata. The growing number of personal computer owners are natural markets for these services. The user cannot, of course, access those systems requiring system dependent equipment.

Keypads, Terminals and Personal Computers

Keypads used to demand information have been primarily used in system dependent viewdata. The keypad generally requires users to utilize the hierarchical, "menu-tree," information search format. While simple in design, this method of obtaining information is time consuming and provides ample opportunity for error. On the other hand, the consumer does not need a sophisticated skill level to use this system. The keypad approach is relatively low cost and at this point appears appropriate for the introductory stage for the mass, computer-unskilled consumer markets. Without a keyboard, however, it is impossible to have "true" messaging capabilities, to utilize alternative systems, to perform enhanced functions, or to quickly and efficiently access data. Currently, however, all four of these capabilities may be unnecessary for many consumers.

Terminals and keyboards provide the user increased flexibility, quicker access to information/services and enhanced capabilities. The more difficult to learn but highly efficient keyword search format is usually offered in conjunction with viewdata using terminals. In addition, the keyboard also allows for "true" electronic messaging and mail. The terminal as a demand device has been used in both system dependent and independent viewdata.

The personal computer enables the user to go beyond viewdata by providing information storage, the opportunity for personal programming and use of independent software packages, and advanced computational capabilities. Firms such as CompuServe also offer personal computer enhancement by providing subscribers with the power and programs of their large scale computers. Further, personal computers and software packages can be used in conjunction with videotex data bases. For example, the Dow Jones News/Retrieval service offers both archival and highly current financial information on firms, industries and markets; Dow Jones software packages and the users personal computer can combine to analyze this data in a variety of ways. The personal computer has been restricted to the system independent category. Therefore system dependent services would be unavailable to the user desiring to use his personal computer.

Telephone versus Cable

Both telephone line and cable delivered viewdata have distinct advantages and disadvantages. A major problem with cable is that while the current household penetration rate is approximately 34%, only about a third of that figure includes the two-way, interactive cable required for viewdata.

A second difference is that cable system operators are not common carriers,which would prevent an independent system operator from using cable. In effect, franchises granted to cable systems by local governments provide for local viewdata monopolies. Wide-band cable does have many advantages over telephone lines. Providing that the interactive cable has been carefully installed, it allows for much faster and more reliable data transmission than telephone lines. Second, communication costs are largely fixed regardless of volume. This enables the system operator to use flat monthly pricing policies, as opposed to the highly usage sensitive pricing strategies necessary for phone based services. Third, cable delivered viewdata doesn't tie up the family phone. Finally, wide band cable should be better suited for providing services such as telemonitoring due to its larger capacity.

Another significant advantage to be gained from cable will be attained as central business districts are wired. Currently, a significant bottleneck in electronic information flows exists when moving information the "last mile" That is, transmitting information from, say, New York to Los Angeles can be accomplished at tremendous speed/volume via satellite and microwave transmission or even dedicated telephone lines; however, moving information from the Los Angeles receiving point out to where it is needed, in homes and offices, requires using telephone lines not designed to carry heavy loads. Wide band cable could ease this capacity constraint and should be an important link in overcoming the "last mile" bottleneck.

During much of this decade, however, the ubiquitous phone system should serve to carry much of the viewdata carriage load. Cable carriage will become increasingly important, nonetheless, as two-way cable is laid and household penetration rates reach the 50% or greater levels projected for 1990. In the early to mid 1990's, however, telephone companies should have replaced much of the currently used pair-wire lines with fiber optic lines. Fiber optic lines can do everything that cable can do, only better. Until that time, cable and telephone lines should tend to supplement one another,and even be used together in hybrid systems, rather than engage in active competition.

Revenue Sources

For the system operator revenues can be obtained from consumers through start-up or installation charges,equipment lease or sale income, and fixed period or per minute usage fees. From content providers (CP's) system operator revenue sources include page creation, storage and updating charges, percent-of-sales income from retailers, per inquiry or lead fees from advertisers, and equipment sale or lease income. Cable operators may be willing to provide certain viewdata services at a loss or less than full cost with expectation of increasing the number of regular cable subscribers and by boosting advertisng sales through a larger subscriber base.

Revenue for the CP includes increased sales of products (goods and services) both over the system and through regular channels, CP's may share in system operator usage fee revenues, financial institutions would use viewdata to reduce processing costs and garner revenues from transaction charges assessed to consumers and CP's, and other CP's would probably receive revenues based on the usage of the information/services.

Viewdata Applications

"In 1979 there were approximately 30 viewdata experiments and operational systems internationally, today (October, 1982) that number has more than tripled," [1, p. 4]. In addition there are over 300 private videotex systems either installed or on order [3, p. 4]. The amount of capital invested in tests and publicly offered systems alone has been estimated to be well in excess of $500 million [7, p.1].

In North America, videotex-like systems began to emerge in the early 1970's when Dow Jones began offering business and financial databases to the business and investment community and the Mead Corporation introduced its Lexis system to the legal profession. In the late 1970's CompuServe (owned by H&R Block) and The Source (owned by Readers Digest Assoc.) entered the videotex arena with services designed for the household market and they quickly became known as the "Information Utilities." These early entrants have been joined by scores of other firms and organizations who have conducted experiments, field tests and/or brought public systems to the marketplace.[5] Some of these firms include Knight-Ridder Publishing, AT&T, CBS, American Can, Chemical Bank, Banc One, Citibank, Chase Manhattan Bank, ADP Inc., Cox Broadcasting Corp., The American Farm Bureau and Times Mirror. Following is a very brief overview of the Viewtron market test which is intended to give the reader a flavor of the activity in the field.

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[5] For an in-depth review of selected activity in the field, please see Talarzyk and Widing," Viewdata Project Reviews." The Ohio State University, College of Administrative Science Working Paper Series, WPS-16 (February, 1982) A revised and expanded version is forthcoming.

Knight Ridder Publishing's subsidiary, Viewdata Corporation of America, has completed concept trials and field tests for its Viewtron system. Knight Ridder will have invested in excess of $25 million by the start of service. The test market phase will begin this Fall in the South Florida area with a subscriber base initially expected to be in excess of 5,000 households. AT&T's American Bell subsidiary will lease dedicated terminals to subscribers, although the terminals may also be purchased for about $600. The service is expected to be priced at approximately $25 per month, not including terminal lease charges. Viewtron will offer an array of shopping, banking, entertainment, information and other services from scores of content providers. Current plans include rolling out Viewtron into 11 other major markets during 1984/1985, providing the South Florida market test proves to be successful.

Viewdata Potential

Relative to teletext the advantages of viewdata include high level interaction and user controlled information searches, from moderate to high speed data transmission (with interactive cable being far faster than phone lines), a virtually unbounded number of services, information that is both broad and deep, widespread commercial applications, and flexible pricing options.

Viewdata can offer information/services of both a general and specialized nature. Indeed, as a demand medium there is ample opportunity for consumers to self-segment and tailor their information and service needs to their individual requirements. However, most information and services geared to consumer markets will be packaged at various levels of specialization and comprehensiveness to enhance the ease of usage and digestibility, as well as to satisfy price/specialization trade-offs. Therefore, viewdata should experience growth through a focused approach using the principles of market segmentation.

ENVIRONMENTAL TRENDS

Rising Costs

Rising costs in many affected industries may serve to give a boost to the videotex solution. For example, within the banking industry it is estimated that the true cost of check processing ranges from $1.00 to $1.50. This and other traditionally low cost banking services are expected to rise sharply due to the labor intensive nature of such activities over the next several years. Similarly, other industries such as publishing and retailing are experiencing squeezed profit margins due to rising energy, raw materials, labor, and building expenses. By electronically providing information, retail catalogs, bill paying, and other services, the prices to consumer should be able to be kept lower. Indeed, computer and communications technologies are on a declining cost curve, while most industries are experiencing upward cost pressures. Over time, videotex systems should increasingly become cost effective.

Demographic and Life Style Trends

Two income families, single parent families, and later marriages (more single adults): These trends reflect a time poor consumer who would directly benefit from the convenience and time saving characteristics the emerging technologies offer.

Increased emphasis on "own time": The value consumers place on personal time is increasing. Activities which are "less than fun" are ideally suited to be substituted for by videotex. In-home banking and shopping will be directly affected by this dimension.

Life Simplification/instant gratification: Many consumers today want things now, with little or no inconvenience. These consumers are well suited to the videotex characteristic of providing a response immediately and on demand. In addition, needs of consumers desiring self-tailored life styles and an increased amount of control over their lives can be satisfied through the videotex option.

Growing computer consciousness: From grade school children through middle aged office workers, exposure to information processing equipment and computer technology is growing. While a portion of society views computers with fear and distrust, this number is decreasing.

Energy price and availability: Videotex, to a significant degree, can substitute for consumer travel. The substitution of telecommunications for time, energy, and travel is viewed positively from both economic and national security perspectives.

Growing information appetites and overloads: Videotex offers comprehensive information from many sources, organized and edited to the viewer's needs. If properly packaged, consumers will receive only the information they want, when they want it.

Rising crime and security concerns: Lower cost alarm systems made possible by videotex systems can provide burglar, fire, and medical protection to the mass market. Public opinion polls frequently cite the increasing crime rate as one of today's major concerns.

Need for low cost and effective messaging capabilities: Electronic mail, bill paying, and other information services can circumvent the mail system and should prove to be an increasingly attractive alternative to the post office.

Life-long educational process: Non-traditional students may continue their formal and informal education through text and tele-courses, without the time and inconvenience problems associated with going back to campus.

A great many other social trends and problems can be satisfied or solved through videotex and related technologies. Telecommuting and teleconferencing are two such related concepts which will grow in importance throughout the 1980's. In the following section, selected issues of importance to videotex development will be advanced.

VIDEOTEX ISSUES

Value to Consumers

There are some skeptics who question whether currently available alternatives cannot perform many of the in-home/at-work functions touted by videotex proponents, often better and at a lower cost. Banks have Pay-by-Phone services; mail order firms often offer toll-free numbers; comparison shopping can be accomplished by multiple catalogs with far better quality pictures compared to computer graphics; a newspaper is much cheaper, portable, and easier to read; information which is deep and specialized is offered by magazines, newsletters, libraries, and through other means; electronic messaging and mail can be accomplished by telex, current viewdata-like systems, and a phone coupled with recorder; computer enhancement can be attained through time sharing systems; electronic games can be purchased and played through their own systems.

What videotex offers is all of the above functions and many more carried through one source, when, if packaged correctly, offers many performance benefits unachievable through any other means. In addition, assuming most of the above services are desired by the consumer, the overall price should be more cost-effective than with each service offered and priced individually. This is not to say that viewdata systems will replace all currently available and potentially competitive forms. On the contrary, videotex will often supplement those forms or combine with other new/old media to overcome inherent weaknesses.

Nevertheless, many critics voice valid arguments concerning the value and cost effectiveness of a number of proposed videotex offerings. Some videotex systems have been accused of simply duplicating presently available alternatives at a greater price and with less utility. Obviously, people will not change their habits unless true performance and/or cost benefits are developed.

Value to Organizations

The major players in North America come from numerous industries, primarily due to the wide and varied applications presented by videotex. Viewdata, due to its inherent capabilities, has attracted participants from publishing, retailing, agriculture, banking and other financial intermediaries, information processing, and communications. Teletext, due to its more narrow applications range, is composed of members primarily from the areas of broadcasting and publishing.

The motivating forces behind entry into videotex can be partially explained according to industry membership. The communications industry, including telephone companies, broadcast and cable systems, and the information utilities, tends to view videotex as an opportunity in which a great deal of synergy can be obtained. Existing excess capacity in distribution and computer facilities, overlapping research and development applications, inplace distribution infrastructures, and complementary activities for current management and other human resources, work together to make videotex a logical extension of their respective businesses.

The publishing, banking, and retailing industries cannot approach the communications industry in terms of achieving its strategic and operating fit. These industries tend to view videotex as more of a threat than an opportunity. This, of course, is a generalization and does not apply to a number of progressive firms within each of the above mentioned industries. However, for the most part, videotex is viewed as both a threatening substitute and a costly, unknown quantity. Therefore, many firms within these industries are standing on the sidelines waiting for a clearer picture of the future to emerge, and at times attempting to forestall development through both passive (e.g., not investing) and active (e.g., legal action) means. Those firms who have moved ahead and invested or participated in projects have often done so as a defensive response to competitive action.

Chicken and Egg Problem

An often cited problem in the industry is the chicken or egg dilemma. The industry is reluctant to bring out new services until there are adequate numbers of people able to receive them to cost-justify their introduction. Without a sufficient number of beneficial services, however, the mass consumer markets cannot be induced to pay for expensive prerequisite equipment. Subsequently, without volume increases, prices for equipment and services will remain high, further inhibiting penetration of mass markets. A key question is, what combination of services is necessary to reach critical mass and subsequently drive costs down, breaking this circular dilemma. This problem especially affects videotex systems requiring consumers to purchase their own hardware, as opposed to those systems which supply equipment at a relatively low-cost rental/lease fee.

Inter and Intra-Industry Cooperation

To a great degree, the opening of the mass market depends upon intra- and inter-industry coordination and cooperation. Indeed, channel members, equipment manufacturers, and technology providers would benefit by appropriate collaboration. A major complaint by many committed firms is the problem of a number of key firms which remain standing on the sidelines, rather than investing their resources. A second concern revolves around the unwillingness of committed firms to share their insights and findings with others. The major argument for industry statesmenship in these early years is that most involved parties would benefit from coordinated efforts which enlarge the total market.

Public Policy Concerns

Numerous legal and public policy concerns have been raised by outside observers and within the industry itself. Privacy and security issues; the problems created by electronic polling; impulse ordering by consumers; copyright/royalty questions; liability for improper performance by channel members; economic dislocation of business and workers displaced by videotex; the possibility of an information rich versus information poor caste system; and a number of other 1984 types of problems.

Technology has often moved so quickly that the courts, legislative bodies and regulatory officials find it difficult to efficiently cope with the legal, competitive and social fallout of technologies such as videotex. Nevertheless, many issues and areas of potential concern have been identified and some possible solutions advanced.[6]

Standardization

Standardization of the various available protocals (software which determines the level of resolution and formats for text and graphic displays) has been cited by a number of industry participants as the single most important factor for the survival and growth of videotex. While most involved wanted standards to develop sans government intervention, the hope was that the marketplace would make an early decision. The standard developed by AT&T, the Presentation Level Protocal (PLP), appears to have done just that. PLP has been described as the "de facto standard" since its introduction in May, 1981. It is currently in the public comment phase, but has been accepted by most participants as the industry standard for the future.

The Canadian Telidon and French Antiope protocals, -- software is the same for both teletext and viewdata in each system -- can be relatively easily adapted to PLP. However, the innovators of both teletext and viewdata, the British, will need to undertake expensive and extensive modifications to upgrade their Prestel (viewdata) and Ceefax (teletext) systems to be PLP compatible. The systems currently operated in the U.S. which have internally developed protocals have virtually unanimously announced that they will adopt PLP when their customers have terminals and personal computers to receive it.

The next section will examine the market characteristics for videotex in terms of potential benefits/attributes offered to consumers, home and business market distinctions, current and future markets and lastly, penetration projections for videotex will be provided.

MARKET CHARACTERISTICS

Potential User Benefits

Many of the aforementioned environmental trends correlate nicely with the benefits and attributes which videotex potentially offers to consumers. Following is a list of benefits and attributes compiled from interviews with industry participants (5, p.54). In all likelihood, the order of importance of these benefits will not be constant across videotex, but will vary by content category, market target, and types of system. The corresponding definitions have in some cases been altered by the authors.

1. Increased control over one's life
2. Convenience: less "hassle" than existing alternatives
3. Time saving: increases time for preferred activities
4. Simplicity: simple to use
5. Comprehensiveness: includes many relevant information categores/services in a single source
6. Organization: provides structure for the users information/service needs
7. Immediacy: information available on impulse
8. Reliability: authoritative source
9. Accessibility: consumers anywhere can obtain benefits
10. Affordability: cost-effective
11. Expectation of technological progress: an idea whose time has come
12. Currency: time-perishable information made quickly available.
13. Energy: not only reduce energy costs, but substitute for travel mitigating energy availability concerns.

Home and Business Market Distinctions

The industry tends to distinguish between two markets, commercial and consumer. Essentially, the division is made by a seemingly distinct seperation of applications and needs. Commercial markets tend to have more readily defined requirements, are able and willing to pay for greater specialization, and are reasonably accessible due to a more enlightened outlook towards innovations. In addition, most firms of significant size are currently using computer based information systems such as information processing systems, in-house computer and data base facilities, and time sharing services. Viewdata services may be integrated with these existing operations and simply extend or augment many current processes.

Consumer markets are much more complex in terms of understanding and penetrating. Their wants and needs are more difficult to assess, they are less willing to purchase systems because benefits are less obvious, they are less able to purchase systems, and they are more difficult to reach in terms of communicating benefits and stimulating adoption.

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[6] This area has only been lightly touched on as another conference presenter has been assigned the task of advancing such issues. For an excellent review of the public policy issues associated with teletext and viewdata, see Tydemann, J. et al., Teletext and Videotex in the United States. McGraw-Hill Publishing Co., 1982.

One need be careful, however, of describing the purpose of usage based on the place of usage. That is, personal shopping, banking and communications through viewdata may take place at work, while a great deal of primary or secondary job related usage may occur at home.

Current Markets

Two years ago subscribers to the information utilities could best be described as computer hobbiests [5, p.60]. The majority used data processing equipment on the job (66%) and often used videotex for data storage, personal computer enhancement, and as a communication vehicle to other computer buffs, major computer manufacturers and so on. The Source now reports that only 40% of its current subscriber base works in computer related areas. Further, new subscribers are much more likely to join for non-computer oriented content, which the information utilities have greatly expanded. Following is an examination of some current market characteristics for the information utilities.[7]

The Source reports (reported in February, 1983) that the average age of its subscriber is 42 years old -- 3 years older than in 1981 -- with 64% over 35. Average income is $59,000; most users are professionals/businessmen; most are college graduates; and the vast majority (90%) are male. In terms of usage 20% of the subscribers base accesses the Source most often at work. Fifty-three percent spend at least half of their access time for primary or secondary occupation purposes. The Source data indicates that videotex users are not solely composed of younger computer hobbiests.

CompuServe has experienced both different and similar trends in their subscriber base. New subscribers as compared to old tend to be slightly younger, a bit less "upscale" in terms of income, are more likely to be female then before, have children who are increasingly using the service, and tend to have occupations which are less technical.[8]

The trend towards less of a computer hobbiest profile, despite a subscriber base which predominately owns personal computers as opposed to terminals, is encouraging. It tends to reinforce the thought that non-hobbiest markets, who purchase videotex services not for the technology itself but for the problems it solves, are beginning to emerge.

Future Consumer Markets

Virtually all of the videotex experiments and businesses indicate that the first wave of future adopters will be "up-scale," meaning consumers with higher than average incomes, job positions and levels of education. Provided below are synthesized market profiles gathered from firms who have conducted and shared consumer surveys and test results in the industry. [5, p. 61]

Demographics.

Age: 25 to 49
Household Income: In excess of $35,000
Education: College or better
Employment: White collar

Personality and Life Style Characteristics.

Pro technology; low resistance to change and innovation.
Self-tailored life styles; strong emphasis on own time, tend to purchase or construct the best, strive towards self-improvement, want things now, and inward directed.
Exposure to computer/communications technology at school or work.
High discretionary incomes; willing and able to pay a premium for convenience.
Non-traditional family structures; large number of two income households, single parent families, and singles.
Time Poor; time constrained and willing to pay for alternatives replacing traditional activities which are less than fun.
Information Overloads; information is important to this group, but they are increasingly finding it difficult to process and organize their information resources.

Other markets include youngsters who exhibit little resistance to new technologies, wield significant influence over their parents' purchase decision and for whom numerous recreation and education applications are being developed. The market that could, perhaps, benefit the most from viewdata includes the elderly, handicapped and otherwise housebound individuals. However, this market is viewed as a longer term target due to its generally higher resistence to technology and a lesser ability to pay for systems than the just described targets.

Market Development and Projections

Viewdata household penetration/projections have varied widely, ranging from 7 to over 50 percent by 1990. AT&T has projected a conservative 7 to 10 percent penetration rate for 1990. International Research Development Inc. (IRD) has recently projected a 13 percent penetration of viewdata systems by 1992 [6, p.3).

The authors, in the Fall of 1982, sent a questionnaire to 24 industry participants which included a section concerning penetration rates. The majority felt that forecasting was a rather fruitless endeavor fraught with sheer speculation. Those who did respond indicated that 10 to 20 percent could be expected by 1990. Following is a review of the current extent of market development.

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[7] From an interview conducted by the authors with Nancy Beckman of The Source Telecomputing Corporation (Feb., 1983).

[8] Jeffrey Wilkins, from a speech given at the conference "Videotex: Implications for Marketing II," (Oct., 1982)

As of February, 1982 the Dow Jones news/Retrieval service had a subscriber base in excess of 60,000, with a growth rate of over 3,000 per month. In January, 1983 the CompuServe Information Service had over 37,000 subscribers with a growth rate of 3,800 per month. The source as of February, 1983 had a subscriber base of over 29,000, with a reported monthly growth rate of over 1,500 subscribers.[8]

These figures can be compared to earlier subscriber totals. In late Fall, 1981 CompuServe had a subscriber base totaling roughly 14,000. At the same time Dow Jones had 25,000 subscribers. In April, 1981 The Source had about 9,000 subscribers. The rate of growth for all three firms has increased markedly. Although the absolute numbers are relatively small, increasing numbers of systems and ever increasing rises in the rate of growth indicates that videotex is beginning to come of age.

CONCLUDING COMMENTS

What does the future hold for videotex? Based upon the analysis leading to this paper, it is expected that over the next ten years teletext will emerge as a mass market medium, primarily because of its more passive nature, low cost and low user skill requirements. Viewdata, on the other hand, will probably experience growth by targeting markets. While viewdata may eventually live up to the projections by some industry observers of becoming a ubiquitous mass market medium, it is doubtful that penetration projections of 50 to 75 percent will be reached until well into the 1990's or beyond.

The problems confronting the industry at this time, such as price, system development and content formation, should be overcome through marketplace resolution in time. The organizations which will ultimately succeed, however, will be those which have analyzed the consumer and the environment most accurately, and at the same time have the distinctive competencies, financial resources, and the will to form consumer dictated systems. It is important to reiterate that consumer resistance to change can only be overcome by providing cost or performance benefits unachievable by current alternatives.

The potential benefits offered by videotex seem to hold promise to help ease the pressures on consumers brought by rapidly changing social, cultural, technological, legal, and economic environments. Troublesome crime rates. changing family structures and work roles, evolving missions of educational institutions, marginal gains in national productivity, lifestyle constraints, energy price and availability concerns, and an information impacted society are examples of some of the problems which potentially can be addressed in a positive manner by videotex, particularly viewdata. The wide collection of services should serve to make increasingly complex lives easier and provide users with unparalleled control over their affairs.

Such benefits, however, will not be achieved without costs to at least some segments of the population. Some current business forms will be altered or eliminated, traditional social patterns may be transformed, and Big Brother fears will become increasingly possible. From interpreters of prophesy and Orwellian futurists to those with a vested interest in the present order, resistance by affected parties will be intense for those applications negatively affecting the status quo. Whatever the final outcomes, one can be assured that over the next exciting and challenging twenty years, the social, political, and economic transformations on a national and international level will be significant.

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[8] Reported to the authors through telephone surveys with each firm.

VIDEOTEX: THE ISSUES

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ABSTRACT

This article reviews the principal public policy issues posed by the new videotex services. These issues concern public access to these systems, their likely responsiveness to consumer information needs and the consumer protection requirements of the public. The article also reviews the regulatory tools available to meet the public's needs.

You have just heard a description of videotex and of the new forms of messaging, shopping, banking and information retrieval opportunities which it can provide consumers.[1]

I want to talk to you this morning about some of the issues which this vast new electronic medium may pose to consumers in terms of their access to, and enjoyment of the benefits which it offers to consumers and citizens.

Unlike the United States Chamber of Commerce's Biz Net, the consumer movement does not have six million dollars with which to develop an independently operated satellite based information network to serve the needs of its members. Thus, consumers must depend on existing information networks to meet their information needs. To date, such networks have not yet emerged within existing governmental, non-profit or commercial information systems. I believe that consumer information needs are of such meaning and importance to the ability of consumers to cope with their daily lives, that at least some of their needs will be met through normal marketplace channels. However, even if videotex systems slowly evolve to meet important consumer information needs, several important issues remain to be resolved before we can be certain that these systems will serve the full range of consumer/citizen interests. These issues fall into three general areas: providing access to the transmission/hardware system to all consumers regardless of their geographic location or ability to pay; ensuring that the full range of consumer information needs will be responded to through the new information technologies and assuring adequate protection to consumers against misrepresentation and fraudulent practices, political manipulation and invasion of their legitimate privacy concerns.

I will deal with each of these issues seriatim, sketching out the importance of each to full consumer enjoyment of these technologies, the obstacles which may exist to their achievement and the regulatory options available to consumers to overcome these obstacles.

1. UNIVERSAL AVAILABILITY OF VIDEOTEX HARDWARE

If all consumers are to participate in these new electronic information technologies, they must have access either to an interactive two-way cable system or to a telephone-linked home terminal. While there are several other over-the-air delivery systems which can deliver information and programs into the home, these systems are typically not interactive and provide only limited access either because of geographic transmission limitations or because of the limited number of channels which they can offer.[2] While offering alternative communication systems for geographically remote areas or for specialized audiences, they cannot offer a broad-scale universal service to the consumer population as a whole.

While these alternative systems can exist simultaneously with the more universal service type systems, fears have been expressed that if licensed too freely or prematurely, they could syphon off the most profitable segments of the market (either as respects audience or as respects programs) thus making it more difficult for communities to attract the investment required to provide the two-way interactive systems (either cable or telephone-based) which videotex requires. In fact, consumers should examine such arguments with caution since in the long run their interests may be best served by a multiplicity of communication sources to provide them with the competition and diversity of sources they need to ensure maximum choice and highest quality.

A second issue confronting consumers in achieving a universal service concept for the videotex hardware infrastructure is how to ensure videotex services to their constituents if private investment does not provide the requisite infrastructure. Two way cable is not a fact of life in most cable systems today.[3] Its cost for cities of 750,000 population can run to $10-12 million and to $3-4 million for cities of 150,000 population.

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[1] Videotex embraces two distinct electronic services: teletext one-way services available over TV sets equipped with a decoder and viewdata two-way systems available over cable or telephone based systems. Only viewdata systems can provide the full range of these services. These remarks, therefore, focus on two-way videotex systems although many of the policy problems identified here are common to both one and two-way systems.

[2] Some of these alternatives include lowpower TV, Direct Broadcast Satellite (DBS), multi-point distribution systems (MDS), or satellite master antenna systems (SMAS). See Washington Post, August 24, 1982, page B1.

[3] In 1982, more than 70% of the nation's more than 4,000 cable systems are still limited to 12 channels. Of these 4,000-plus cable systems, very few are interactive (capable of handling videotex services) and only half could be converted.

Moreover, there may be many consumers who may not be able to afford to purchase the terminal required for telephone-based systems.

Similar issues confronted the nation at the turn of the last century as to whether, and how to assure all citizens access to the then rapidly emerging postal, telephone and electric services. It was not until the concept of rural free delivery was adopted in 1856 that residents of small towns and remote areas could get access to newspapers and magazines and other sources of printed materials. A similar wasteland existed for a large number of communities in their lack of access to electricity and later to telephone services. It was not until 1935, that the Rural Electrification Administration was established with a mandate to make loans to communities to install the necessary telephone wiring which the private sector had found unprofitable to install, and not until the 1940's, when this mandate was extended to the installation of electricity. Thus, it was ultimately through government intervention that all American citizens were enabled to participate in the electrical and telephone wonders of the early 1900's. Congressman Newt Gringrich (R-Ga.) has recently suggested that the Homestead Act is another precedent which could be followed to make the requisite videotex terminals available to American families.[4] He offered a bill in Congress, the Family Opportunity Act, which would provide a tax credit and five year write off to citizens to purchase a home computer and related software.

The extent to which problems of hardware availability will develop with the new electronic technologies is as yet unclear. There may be other solutions to facilitate citizen access to these services such as municipal ownership of cable systems, provision by the private sector of terminals free of charge to citizens to encourage their use of videotex services or the installation at government expense of terminals in schools, libraries, government offices, or other public places. But the importance of the universal service concept to the long-term social, economic and political health of the nation is an issue which must be grappled with. Its solution will depend in important part on the significance 20th Century America decides to attach to the widespread availability of information to all citizens as a prerequisite to their enjoyment of the economic and social fruits of our society.

2. THE RESPONSIVENESS OF VIDEOTEX SERVICES TO CONSUMER NEEDS

Unless videotex systems in fact provide the information which consumers need in order to cope with our complex 21st Century society, they will fail to fulfill their promises for enabling a strong and informed consumer and citizen to flourish and play their essential role in our economy and democracy. Issues of the content of videotex offerings as well as of their quality are, therefore, of the greatest significance to consumers as videotex systems develop.

At the present time, there are no videotex services which provide consumers with the range of information which they need in order to cope with their daily lives. No videotex data base exists to help consumers select a suitable lawyer or other professional, check the ingredients of commonly used drugs, or the nutritional value of foods, locate an appropriate nursing care facility, prenatal clinic, emergency room, hospital or medical specialist, find an available job or identify the educational institutions or training courses which meet the prospective student's needs and qualifications. Maintenance and repair records on durable goods, quality of services offered locally or nationally, experiences of product and service users, comparative prices and warranty terms and conditions, product safety records and recalls could all be made available electronically to consumers and would be immensely valuable to them. Assistance in filling out income tax returns, help in locating government services and eligibility criteria are other services which videotex systems could provide to consumers.

Information of value to consumers and citizens can be defined to fall within four general areas: political information by and about candidates and their positions; issue-oriented information which can be highly emotional and confrontational; information about products and services offered in the marketplace which is frequently also regarded as controversial; and, finally, general factual non-controversial information such as is found in directories, almanacs, encyclopedias, histories, and the like.

Traditionally, society has treated the protection accorded the communication or dissemination of these types of information differently dependent in large part on whether they were in print form (in which case they were largely immune to any content regulation other than libel) or were disseminated over air. In the latter case, largely because of limitations of capacity as respects both channels and air-time, an FCC administered regulatory scheme developed to ensure network attention to local issues, equal time to political candidates and fairness to opposing interest groups to present their views in response to positions previously aired. Finally, for common carriers because of their government protected monopoly status, an obligation of non-discrimination among customers and confidentiality of messages was imposed on the traffic they carried.

Today, consumers must decide what position to take on content regulation of the new videotex services. Information on these systems is essentially textual and graphic, and hence similar to printed materials. Yet because they are carried over the air in a medium which today is limited in terms of channel availability, but together with telephone based systems, potentially is to virtual unlimited capacity, decisions must be made as to how, if at all, older forms of regulation and constitutional protection will be applied to these new services. The essential issue is not simply a legal or constitutional question of how or whether to fit new wine in old bottles. Rather,the issue must be thought about also in terms of the essential and significant policy question of how to ensure the responsiveness of the new media services to public need.

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[4] "Information Science in America", Special Bicentennial Issue, Bulletin of the American Society For Information Science, vol. 2, no. 8 (March 1976).

Information, more than ever today, is the basis for power and effective action. An informed citizen is an absolute requisite for a healthy democracy just as our market economy can only function if consumers are knowledgeable about its products and services. The social imperatives of not having a society divided between the information poor and the information rich must also be considered.

The limited experience available to us today as to the information offerings of cable or computer based systems does not auger well for the future creative use of videotex to meet consumer and citizen information needs. Unfortunately past experience with existing traditional media practices respecting the provision of information to consumers does not offer much hope for future improvement. Consumers must watch closely whether information managers of videotex systems will be willing to carry a data base on the safety or repair records of specific automobiles or of automobiles in general offered by an automobile manufacturer without also carrying a comparable data base offered by Consumers Union or by Road and Track Magazine.

Because consumers have such a direct interest in the application of videotex systems to deliver information geared to their needs, they have a special role to play in determining how these systems will in fact perform their critical information gatekeeper role.

Application of the FCC rules of equal time and fairness to videotex systems would ensure at least a minimum response to consumer-citizen needs for full information about political candidates and their positions as well as about all sides of controversial issues. They could provide the basis for ensuring that information in a data base offered by one candidate or one advertiser could trigger the right of other candidates or information providers to round out the information by inserting data relevant to the issue. It is clear, however, that none of the FCC content rules are designed to compel information managers outside the fairness and equal time rules to provide information about subjects of particular concern to consumers, such as nursing home facilities, medical care, etc. Moreover, what is controversial is not always immediately obvious and reasons for excluding some information providers or some subjects of information could be prompted as much by estimates of the public interest, concern for not offending public taste, question of the honesty and integrity of the data and the like. Thus to depend on doctrines of equal time and fairness may not be adequate or relevent to achieving the goal of a computer utility open to all comers as a matter of right.

Local municipal authorities have sought to grapple with the issue of public interest use of cable channels through their control of the franchise which they require of companies to wire their communities. These franchise agreements typically require cable owners to dedicate certain cable channels for public use or lease by third parties.[5] Some of these public access channels have been imaginatively used for community bulletin boards, high school drama and sports events, local library programs, educational offerings sponsored by local community colleges and universities and information services provided by municipal and civic authorities. In addition, some cable owners, recognizing the lack of resources of non-commercial information providers, have provided them with free wiring to school systems, TV production studios and facilities, mobile TV vans and the like. By analogy, information system managers of computer based non-cable systems could also offer non-profit third party providers technical assistance in the preparation of data bases and the formatting of information frames, or even computer data base storage capacity. Undoubtedly, access policies for profit information system managers will turn in part on available capacity, the economics of the data base storage and listing, and fundamentally, on the willingness of the information manager to respond to third party information provider needs. Moreover, the determination of the community to insist on third party information provider access to the cable data base will in the long run be a critical element in how these systems will develop in terms of third party access. Consumers must also insist that where cable systems have provided leased channels for the public's use, these channels be made available on some type of public bid or first come first serve basis to assure maximum public access.

The issue of access to cable videotex systems has already been raised by a security monitoring system company challenging the decision of one cable system to offer this service through a competitor.[6] The outcome of this court challenge will be important and may result in the development of some form of right of access to videotex system. It will be important to consumers to ensure that data bases relevent to their concerns be included in whatever access policy may be developed by the private sector.

Currently, there are bills pending before Congress to preempt much of the local cable regulatory authority and confine it to federal jurisdictions. Resolution of this issue may directly impact the ultimate resolution of the amount of control to be asserted over information manager systems and consumers will want to consider carefully whether their interests will be better served by federal or local regulation and, if so, of what nature.

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[5] For an excellent summary of the potential of public access channels for community and consumer use see Stearns, Jennifer, "A Short Course in Cable", Office of Communication, United Church of Christ, 6th ed., 1981.

[6] For an analysis of the law relating to media access, see Barron, Jerome A., "An Emerging First Amendment Right of Access to the Media", The George Washington Law Review, vol. 87, page 487, (March 1969).

Local libraries could also be looked to as possible dispensers of data bases assembled by third party information providers where the information is essentially local in scope and interest. Some issues relating to such issues as energy conservation options, nuclear safety, transportation of toxic wastes, abortion or military weapons are both national and local in interest and scope since these issues also have regional and local aspects in terms of particular dump sites, nuclear or defense plants, etc. Similarly, information on employment opportunities, medical care facilities or educational institutions or courses to be useful, must be available on a local, regional or national basis and, again, a central data bank with national or regional marketing outreach will be necessary in order to reach the intended potential consumer audience.

If information managers of either cable or telephone-based computer utilities choose not to carry any information on these subjects at all, the public could be severely disadvantaged and the new technologies will not have fulfilled their potential as a total information source for the public.

In my judgement, this is the central issue confronting consumers, perhaps more than any other group, since they have most suffered in the past from the media's and advertisers' inability or unwillingness to appreciate or respond to their real information needs.

3. PRIVACY, INFORMATION QUALITY AND OTHER CONSUMER PROTECTION ISSUES

Information system managers administering the billing, messaging and ordering services offered over their systems will be in a position to collect a great variety of information about the tastes, habits, opinions and specific information requests of their customers or subscribers. Fears have been expressed about the potential impact of this compendium of information on individual privacy and freedom. Similarly, issues of quality, bias and completeness of the information offered by videotex systems are of the utmost importance to consumers if these systems are to serve their needs as both consumers and citizens.

Finally, other issues of deception and misrepresentation may also be involved in the systems' offerings and promotion of transactional services. The identification of responsibility as between system manager and seller and the need for redress mechanisms in the event the goods and services are not delivered or do not conform to their description will inevitably arise as these new transactional services begin to come on stream in significant numbers. Questions of whether traditional FTC type protections against false and misleading advertisements can or should be applied to a medium which is essentially information-based will also need resolution as a matter of policy and of constitutional right. Each of these issues requires a brief elaboration.

A. Privacy

Fears have been expressed that videotex services could pose critical issues of privacy invasion for consumers utilizing these services. These videotex privacy issues could involve third party interception of messages sent or received by consumers, unauthorized access to financial accounts of consumers using videotex banking services, or misuse of information in the records of the information system about a consumer's use of the financial, transaction or information retrieval services offered by the information system.

Technically any electronic communication system is vulnerable to unauthorized access and manipulation. Computer crime is a known phenomenon and electronic wire tapping must be recognized as equally possible. Banks are designing security systems to maximize the impregnability of the accounts of their customers who wish to subscribe to their telebank services. One goal for consumers and information system managers would be the design of an optimum security standard to which all telebanking services must conform in order to be able to offer their services to the public. Whether or not this goal is reached, as a minimum protection, consumers must insist on evidence that security precautions have indeed been built into any telebanking service which is being offered.

Message interception protection and confidentiality obligations are currently provided for by statute for voice and text common carriers such as AT&T, Western Union, RCA, and ITT as well as for the United States Post Office. However, questions have been raised as to the applicability of these statutes to videotex cable or telephone-based message systems. It seems clear that the public policy concerns of message privacy and confidentiality should not depend on the technology used to communicate the message. However, consumers must see to it that whatever appropriate legislation, FCC regulation, or cable franchise provisions are necessary must be enacted or provided for in order to ensure the required protection against interception and breach of privacy.

Aggregation of record-keeping data on consumer use of videotex services is perhaps the greatest fear of consumers as they contemplate the widespread application of the new videotex services. Visions of Big Brother with access to large amounts of dossier-like data on things purchased, money spent, trips taken, and the times when all these things are done is a matter of serious concern to many thoughtful citizens. In part, the existence of governmental tax return and social security computerization has always posed this threat to consumer privacy from governmental sources. Videotex services now present a similar threat from the private sector on a much broader range of consumer activities. Legislative protection from federal and credit company encroachment on individual privacy has been based essentially on a disclosure concept concerning the fact of data retention or of a government request for access to such data together with the right to correct errors in the records maintained.

A study of 12 cable systems in the top 30 markets disclosed that in each instance the franchise agreement under which the franchised companies operated their cable systems restricted their gathering and dissemination of personal information about subscribers. In ten cases, written consent of the subscriber was required before the company could distribute subscriber information to another party.[7]

Warner Amex Cable Communications Company has created a Privacy Code reflecting the practices it will voluntarily follow to protect the privacy of their subscribers. This Warner Amex Code is by far the most comprehensive statement on privacy protection and should stand as a model to the community since it goes beyond mere disclosure and a right of correction and in fact limits the collection and maintaining of data. Under the code, Warner and any third parties providing services to Warner subscribers agree to explain to subscribers the information gathering functions of the services provided; Warner agrees to safeguard the physical security and confidentiality of subscriber information and will recognize only such subscriber information as is necessary to bill or render the service and retain such records for viewing or response only so long as necessary to perform that function. Warner reserves the right to aggregate subscriber information (without revealing individual subscriber information) when necessary for marketing or developing new services. Finally, Warner will not provide subscriber mailing lists to third parties without providing subscribers with an opportunity to remove their name. Warner will not accede to any requests for subscriber information from a government entity without proper legal process and will notify subscribers if such process is received if permitted to do so by law.

The Warner Privacy Code is an important industry statement and consumers should make every effort to support the adoption of similar codes by private sector or governmental information systems.

B. Quality and Diversity of Information Offerings

To date, cable and other non-broadcast operated information systems have strongly resisted efforts to classify them as common carriers and to impose upon them any concepts of open access to all information providers which that status might comport. Similarly, strong arguments are presented that in view of the potential unlimited capacities of videotex systems, content regulation, such as FCC has historically applied to the broadcasting industry, would be inappropriate and unnecessary. If these arguments prevail, as appears likely at least in so far as the FCC is concerned, then videotex services will be likely to be analogized to the print media and protected by the First Amendment in so far as issues of accuracy, bias or completeness are concerned. If the free marketplace of ideas concept is to be effective in ensuring quality, it is essential that a broad variety and diversity of information sources are in fact available to consumers. Thus competition and open access will be critical to assuring the requisite diversity of information systems and of their information offerings.

One problem will arise, however, in the near term, regardless of the future potential of videotex technology, as a result of the defacto monopoly which most cable systems enjoy in their communities because of the huge cost involved in laying cable. A similar problem of cost and hence of de facto monopoly will depress the likelihood of competition for telephone-based systems utilizing fiber optic cable in order to generate the requisite capacity to serve the substantial data and voice requirements of the new videotex systems. Thus, for the near term it is possible that competition cannot be looked to as the sole tool to promote diversity of information systems as well as diversity of offerings within systems.

Several tools exist to remedy this potential structural weakness. One such approach is to mandate separate ownership between cable and telephone-based information retrieval services in order to ensure diversity of information sources. Another tool is for municipal authorities to continue to require cable systems operating under their franchise to set aside certain channels for lease to third parties or for use by the public. Indeed, Senator Goldwater introduced a bill into Congress (S. 2172) in 1982 which would mandate cable systems having more than twenty channels to lease access channels to the public.

Other available tools are to assure to all information providers practical access to their markets by establishing non-commercial computer utilities with open access policies. The establishment of such computer utilities or the preparation of consumer information software and data bases could be encouraged through a federal or local government REA type lending authority, through subsidies or generous tax write-off policies to non-profit organizations such as local libraries, educational institutions, hospital or medical care professionals in municipalities or community or consumer groups. A condition for qualifying for the loan, or subsidy or tax write-off would be demonstrated expertise and capacity on the part of the beneficiary to establish and run such a utility and a willingness to agree to some type of open access policy or evidence that the data bases to be created serve information needs of consumers and citizens which are not otherwise served by the commercial marketplace.

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[7] Kaplan, Stuart J., "First Amendment Implications of Cable Television Regulation by U.S. Cities", Presented at World Futures Society Conference, Washington, D.C., July 1982.

C. Consumer Protection Issues

A final set of issues to which consumers must be alerted involve familiar problems of deceptive representations and misleading practices respecting products and services offered for sale on videotex systems. Some advertisements on videotex systems will be openly presented as such and questions of their accuracy will be identical to traditional false and misleading advertisement issues appearing on TV or in the print media. However, questions will arise in the new media as to whether a data base offering on some product or service is an advertisement or simply a statement by an information provider of facts on a particular subject. Today advertisers are creating what is being termed in the trade as "infomercials". These are short documentaries (5, 10, or 20 minutes) on such topics as travel tips, how to purchase automobiles, food nutrition, health regimens, nuclear or other energy issues. If it is decided that such fact statements are ordinary speech rather than an advertisement, traditional FTC type protection of accuracy will no longer attach. In this situation, a minimum protection for consumers could be a requirement that information videotex systems disclose the sponsored sources of information data bases offered by them. Such a disclosure system was instituted by the British videotex system, Prestel, which prepared a Directory of Information Providers clearly listing the names of all information providers in their system. How to define "sponsorship" and make certain that the real commercially self-interested information providers are listed are important problems which remain to be worked out if this protection is to be effective for consumers.

Users of videotex transactional services will also need protection from misleading representation of goods and services and the right to refunds if the goods ordered are not as represented or are unreasonably delayed in shipment. Finally, questions of liability and redress as between the product and service provider and the information system offering the product and service will have to be resolved. Presumably, if transactions are financed directly by sellers via credit card or other mechanism, the information system carrying the service should be in no different position than a newspaper or TV carrying an advertisement for the service. On the other hand, if the information system is involved in the transaction as a guarantor of quality or reliability, then some liability might attach.

CONCLUSION

Consumer leaders have an important, perhaps even vital, role to play in ensuring that consumer interests are responded to by the new videotex information systems. The public policy infrastructure within which these systems will develop is now emerging. It is essential that consumer leaders make clear in timely fashion the need to respond to their concerns for broad consumer and information providers access to these systems, diversity of information offerings to meet real and pressing consumer needs and adequate protection mechanisms for consumer concerns with issues of privacy, quality and accuracy of data and fairness of market practices.

PRESTEL IN USE: LESSONS FOR AMERICANS[1]

E. Scott Maynes, Cornell University[2]

ABSTRACT

Prestel, the British version of videotex, has been operating as a commercial information storage and retrieval system for several years. During 1981-82 the author undertook a critical review of Prestel from the consumer viewpoint. Fundamentally, was it effective, as compared with alternative sources of information, in providing satisfactory answers to questions put to it. This paper summarizes "lessons for Americans" that emerge from this investigation.

INTRODUCTION

The Central Issue: A Dream, A Nightmare, or a Mirage?

Prestel is the British proprietary name given to the information storage/retrieval system known generically as "videotex" or "viewdata."

For the consumer movement Prestel represents a fantastic dream--an information system that, suitably developed, would enable *users* greatly to improve their standard of living and their capacity to cope with problems. By improving the functioning of markets, Prestel might confer similar if perhaps lesser benefits on *non-users*. Inappropriately developed, however Prestel could turn out to be a nightmare, rather than a dream, for consumers. It would lead them to "bad buys" rather than "good buys" and rob them of their purchasing power, both individually and collectively.

Or Prestel could turn out to be a mirage. Remember an invention called Picturephone--It was a device that enabled you to see the person on the other end of the telephone line? It worked, but no one wanted it!

This paper has three parts:

i. An Introduction to Prestel

ii. The Nature of My Research

iii. Prestel's Lesson for Americans

AN INTRODUCTION TO PRESTEL

The System Described

In essence, Prestel is an information system in which users seek answers to their questions by calling onto their home or office television screen items of information that are stored in a central computer. If Prestel can provide better answers more cheaply and more conveniently then competing sources of information--periodicals, travel agents, yellow pages, and etc.,--then it will be a "winner".

Prestel is the only fully operational, commercial videotex system in the world. In Britain in January, 1982 there were 13,000 Prestel sets in use, of which about 2,000 were in residences. (This contrasted, graphically, with a 1979 forecast of 200,000 sets in place, of which 95 percent would be sited in residences.) Subscribers had access to 180,000 pages of information supplied by 650 British and foreign information providers, available on a 24-hour basis with a high degree of reliability. For £200 ($300-$350) one could buy an adaptor that would convert a black-and-white television set into a Prestel receiver. Input devices, both numeric and alphanumeric, as well as printers are on sale.

Information retrieval has been available on Prestel from its beginning. In September, 1981 user-to-user messages were introduced, making possible the ordering of tickets or merchandise, entering quizzes, conducting public opinion polls, and the like. Early in 1982 Prestel introduced "Gateway," a service that enables the user to conduct additional transactions and to have access to "outside" data bases.

Some Sample Questions

To convey the flavor of the Prestel system, four sample searches are summarized below. Details of each search are recapitulated in the Appendix of [5].

Exchange Rates. This search reveals Prestel at its best. The first step was to look up "Exchange Rates" in the Prestel Printed Index, i.e., the "Yellow Pages," then the appropriate page number was pressed in the control keypad and 13 seconds later (!) there appeared on the television screen the current rate of exchange of the £ against ten or so other currencies, updated 20 minutes ago. The charge for the search was $.15 (8P). A marvelous performance, cheaper and swifter than the telephone, swifter and more current than *The Financial Times*.

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[1] This paper represents a culling from the author's monograph [5]. For the official view of Prestel's progress, cf. [4]. The most convincing scenario of Prestel's future development is that of Campbell and Thomas [2]. For an annotated review of the 30 Videotex experiments underway in the U.S., cf. Talarzyk and Widing [8]. For a consumer's view of the possibilities of Prestel, cf. [6]. For the creator's view of Prestel's possibilities, cf. [3].

[2] Professor, Department of Consumer Economics and Housing.

A Trip by Motorail. Motorail is a service by which the traveller and his car go on the same train. The purpose of this search was to ascertain departure times, fares, and availability for a Motorail trip from London to Perth. This search started with the entry, "Railways," in the Prestel Printed Index. It continued using the internal tree-structure index that takes you from page to page through the Prestel files until you obtain the information desired. This internal tree-structure index, like a taxi-meter, incurs time charges as you use it, at a rate of $7-8 a hour during daytime hours and $1.60-$1.75 at other times. This search took 20 minutes, cost about $2.50, but yielded the desired information.

It illustrates a limitation of this particular index: success depends on familiarity with the exact phrases used in the index. In dealing with a reservation clerk in a railroad station or on the telephone, you can ask about "a service in which you and your car go on the same train" and expect to get an answer. Not so with this computer index which responds *only* to the word "Motorail."

Motor Insurance ("Automobile Insurance")

The object of this search was to ascertain (1) what motor insurance coverage is desirable, (2) what is offered, (3) at what prices and from whom. The search involved three starts.

The *first start* aborted almost from the outset. The page that was supposed to contain information about "Motor Insurance" according to the Prestel Printed Index pertained instead to *Travel* Insurance, not Motor Insurance. Thus the user was thwarted by an indexing error.

How to proceed? A *second start* was made by looking up "Insurance" in the Prestel Printed Index. Sure enough, this start lead to a subheading, "Motor Insurance." There were three files under "Motor Insurance." The first, offered by the Norwich Union Insurance Company consisted of typical public relations copy, telling of the company's history, size, and etc., but offering no concrete information helpful to a potential purchaser. A second file, offered by the Royal Automobile Club, for which the user paid a $0.01 "frame charge," described "Third Party coverage" well and "Comprehensive" unclearly. A final file under "Motor Insurance" was offered by the National Union of Teachers but was relevant only to teachers.

Thus ten minutes and a dollar's worth of search, yielded nothing. No useful information had been obtained and the user was irritated by irrelevant public relations copy. This search illustrates a pervasive problem of Prestel: the user is often unable to discern *in advance* whether its files will provide the information he seeks.

New Car Purchase: What New Car Will Fit the User's Needs, Budget, and Offer Good Value for Money?

This was a search for advice on what new cars represent good "value for money" in the different size classifications--compact, mid-sized, etc. This is a type of information provided by *Consumer Reports* in the United States and by *Motoring Which?* in Britian.

Five minutes on Prestel, employing every approach he could think of, left the searcher stymied. Unfortunately, the information on new cars in Prestel's files is organized on the basis of particular models: the searcher must designate a particular model before he can obtain adequate information about it.

This search cost $1.00 and five minutes, but left the searcher frustrated and unhappy with Prestel. Why hadn't they organized their files so as to be useful to me and others like me? Why hadn't they set themselves up to provide the advice that *Motoring Which?* offers so helpfully?

Later the same searcher explored Prestel files relating to particular cars, e.g., a BL Mini, and found them most informative.

THE NATURE OF MY RESEARCH

Prestel's "Lessons for Americans" rest on two research projects on Prestel carried out by the author in 1981-82. The reader should know something of the nature of these two research projects.

The *first* was an assessment of adequacy of the Prestel data base, i.e., the extent to which the Prestel data files provided satisfactory answers to the questions asked. The adequacy of the Prestel data base was tested by posing and seeking answers to a small set of questions that any consumer might address to Prestel. The questions and answers described above are representative.

This study was *not* a test of consumers' reaction to Prestel *per se*. The *data base* may be tested by a single individual. The validity of such a test rests on its documentation: others may examine the documentation, reproduce for themselves the steps taken by the investigator and then judge whether they agree with the assessment. On the other hand, a full-scale test of consumers' reactions to Prestel would require the exposure of a representative sample of prospective users to the system under realistic conditions; it cannot be carried out by a single investigator.

This study by the author was conceived as a *pilot study* whose purpose was to explore the data base and to develop a methodology for assessing it, exhaustively. It became a substantive study when first the author and then the Steering Committee

Of The Prestel For People Project[3] became convinced that a small-scale investigation--it dealt with only 16 questions--was itself persuasive and that further efforts would be wasted.

The second study consisted of a critical review of Prestel from the viewpoint of the consumer. In undertaking it, the author drew on the literature of Consumer Economics and Consumer Behavior as well as everything available on both Prestel and consumer information systems in general. The persuasiveness of this paper rests not on statistical tests or formal models, but rather on the cogency of the arguments and the evidence presented.

Readers wishing to examine these studies in detail should consult [5].

PRESTEL'S LESSONS FOR AMERICANS

The Adequacy of the Prestel Data Base

Prestel tended to provide answers that were either "highly satisfactory" or "highly unsatisfactory" with few in between.

Examples of successful searches resulting in satisfactory answers were information about exchange rates, the advantages and disadvantages of inflation-indexed government bonds, the pros and cons of a particular model of used cars, Motorail fares and rates, and prices for a wide variety of shavers (but all from a single, large retail chain). Unsuccessful searches included air schedules and fares from London to Copenhagen to Oslo and return, weather during the next week at a vacation site, stoves, bicyles (no information at all, despite the index heading), advice on value-for-money in a new car, prices of motor insurance. Problems that plagued users in this small study included: high costs, when known; subject matter entries with too little useful information; indexes that were time-consuming to use, costly, errorprone and frustrating; incomplete instructions to users; too few topics; and files not organized to meet the user's needs.

Is the Prestel data base likely to be improved in the short term? It seems unlikely. Responsibility for the number and quality of information files rests with individual information providers and not with the government agency that "runs" the system in general. And here Prestel is in a "Catch 22" situation. Unsatisfactory answers to questions posed--if the author's experience is any guide--will turn away new subscribers. At the same time Prestel's current audience is too small to induce information providers to improve their files.

The lessons for Americans are clear.

1. First, some organization must be assigned responsibility for maintaining the quality of files;

2. The monitoring of the quality of the files is a first-priority task that must be resolved at the outset lest an American Prestel not get off the ground.

An Efficient Index

Indexing is the bane of any information system. So, too, with Prestel. This is ironic because the inventors of Prestel, in creating the "tree index," felt they had devised an easy-to-use index.

Prestel has three indexes, all unsatisfactory for reasons spelled out below.

Prestel's primary index is the internal tree index organized by subject matter and illustrated by the Motorail case in the Appendix. The tree index is unsatisfactory because:

1. Its use involves high money costs that increase with the length of a search, like taxi meter;

2. It is frustrating and tedious to use;

3. Users are sometimes unable to find answers that do exist in the Prestel data base [1, 7];

4. It fails to give an "early warning" that an answer is not to be found in the Prestel data base.

The printed subject matter index--essentially a "Yellow Pages"--is unsatisfactory because:

1. The terms used and the thought structure embodied in this index are not those of ordinary consumers;

2. It is not redundant, failing to include all or even most of the words or phrases that different people use to denote the same topic;

3. There are too few cross references.

There is also a printed index of information providers, e.g., British Airways, National Westminster Bank, Central Office of Information, etc. It is also unsatisfactory. Because it is less important, we will not comment on it here.

A good index must:

1. Maximize the probability that the user will obtain the information he wants, and

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[3] The Steering Committee Of the Prestel For People Project consisted of government officials, all of whom were highly familiar with and expert with respect to Prestel. They included Joan Macintosh, National Consumer Council, Chairman; Sir John Barran, Central Office of Information; Alex Eastabrook, National Association of Citizens' Advice Bureaus; Jeremy Mitchell, National Consumer Council; St. John Sandringham, Consumers' Association; Ann Smith, National Consumer Council; Robin Yeates, London and South Eastern Library Region; Norman Willis, Council for Educational Technology.

2. Minimize the probability of "wild goose chases"--the probability of undertaking a long search only to discover that there is no answer in the data base, and

3. Economize on the money, time and psychological effort required to achieve the first two goals.

The achievement of these objectives probably implies such features as redundancy in the words and phrases used to identify topics, extensive cross-listing, extensive and hierarchical use of subheadings, and a non-tree structure, unless it is computerized.

Prestel's experience should teach us Americans that the development of an efficient index is a high-priority task. One possibility that merits exploration, in the author's judgment, is the multiple key-word search. For example, suppose one wanted to obtain information for the following key words or phrases: restaurants, midtown New York City, medium-priced, Chinese. An index or computer program that selected all such restaurants, quickly and at low cost, would be most helpful. It seems likely that this idea could be generalized.

The Matter of Access

From its conception Prestel has been viewed as a "simple" system that could be used in the home by ordinary consumers operating the system themselves. However, the author's investigation uncovered a number of situations where ordinary consumers, using the system would have been thwarted, frustrated, or have conducted inefficient searches.

This raises the question of which serves the consumer better--(1) self-operation, (2) operation by an expert, or (3) some hybrid "guided access" operation in which ordinary consumers use Prestel but with expert guidance readily available.

It is obvious that self operation requires better training of users, better indexes, and a better quality data base. Only self operation (or a mainly self-reliant version of "guided operation") is compatible with home use. Expert operation adds to the cost of Prestel use since the services of the expert must be recovered.

Economies of Scale and Their Implication

For home users, Prestel embodies large economies of scale: the more answers the user obtains, the lower the cost per answer. Indeed, costs could become negative! This, in fact, occurs for subscribers of Consumer Reports or other product testing magazines when the savings that users obtain from product test information in the magazine exceeds the cost of a subscription.

Economies of scale for home users have many implications for the developers of Prestel and similar systems. First, the more questions the system can answer, the more attractive the system will be to the user. Secondly, the more satisfactory each answer, the more attractive the system will be. Thirdly, the more components of the purchase process with which Prestel can deal--answering questions, ordering, paying, providing credit, etc.--the more attractive it will be.

Users of Prestel will accept or reject the system as a whole. This implies that everyone involved has an interest in everything that every other party does with respect to Prestel--British Telecomm, equipment manufacturers, information providers whether public or profit-making. An example makes the point more cogently. A private retailer's excellent file on electric shavers should be regarded as a "plus" by everyone whether a consumer, government agency, British Telecomm, or another private firm: it helps "sell" the user on Prestel.

Similary, all concerned have an interest in technological extensions of Prestel such as gateways to alternative data files, alphabetic keyboards, copiers, videodiscs, compatible micro-computers, full interaction to make possible ordering, paying, financing, back-and-forth questioning.

Economies of scale have applicability to advertising, too. As long as Prestel is young and the number of questions and functions it can handle is limited, large advertising efforts will be required to induce people to use Prestel initially, and also to remind them to use Prestel when it is appropriate. As Prestel matures and provides more information and more functions more cheaply, then it will become what Sam Fedida, its inventor, terms the "obvious first port of call" [3]. When this occurs, Prestel will become almost self-advertising. Indeed, advertising will focus exclusively on the recruitment of new users.

American developers of Prestel-like systems would be foolish if they did not recognize these implications of the economies of scale of Prestel for its development here.

SUMMARY

The research reported in this paper has sought to provide an interim evaluation of Prestel as an information, storage and retrieval system. We should be deeply grateful to the British for their invention of and investment in Prestel. Careful study of their problems, failures, and successes should enable American developers of similar systems to avoid the pitfalls that the British have encountered.

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ADVERTISING AND MARKETING ON VIDEOTEX: THE CONSUMER PROTECTION ISSUES

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ABSTRACT

This discussion will highlight the consumer protection issues that may arise with advertising and marketing applications of videotex. Most current regulations that prevent "hidden" advertising, and protect consumers from high pressure sales or late delivery of mail-order goods are tied to a particular medium (e.g. mail, broadcast) and would not be applicable to videotex.

Marketers will look to videotex as a new medium for advertising and in-home retailing. This development has obvious advantages for consumers--videotex could produce more informative and detailed advertising available on request and could save shopping time as well by facilitating in-home price-comparisons, and direct ordering and payment by electronic means. But there are some potential consumer pitfalls lurking in the new technology of which we should be aware.

ADVERTISEMENT OR INFORMATION?

In commercial television, the advertisements are hard to avoid. One must leave the room or turn off the set. The videotex advertiser, however, will have to offer something that is both useful and attractive in order to encourage the viewer to press the button that will result in a screen full of advertising. Thus, a tool manufacturer might offer "free" pages of advice and information on home remodeling, featuring, of course, the manufacturer's brand of tools, rather than presenting a more conventional advertisement.

Because such features do not look like advertising, the viewer may be persuaded to access these pages. Most people realize that an advertiser will present the object to be sold in the most favorable light. Non-commercial organizations, such as Consumers' Union or government agencies, have no interest in selling any particular product, and thus their information might be more valued by the consumer.[2] Videotex advertisers who desire the credibility and drawing power of such neutral information sources may be tempted to blur the line between information and advertising.

One straightforward solution to this potential problem has already been adopted by Britain's Prestel system--i.e. the provider of the information must be clearly identified on each screen of text. But is the answer really so simple? Will the average viewer surmise, for instance, that the National Commission on Egg Nutrition is not a government agency, but in fact a trade association bent on promoting a taste for eggs? And does everyone know that a beautician and vice president of the Gillette Corporation has a vested interest in the sale of Toni Home Permanent Waves because Toni is owned by Gillette? Thus, a videotex menu or recipe from the National Commission on Egg Nutrition could encourage viewers to eat more eggs without giving credence to the counter arguments that eating too many eggs could increase the risk of heart attack.[3] Similarly, the beautician's recommendation of Toni hair care products may achieve more credibility in the eyes of those not schooled in the corporate holdings of Gillette.

Distinctive formats for commercials, such as we see in magazines or on television, have not yet evolved in videotex. The practice of advertisements aping articles or editorials was banned by statute in magazines or newspapers delivered by mail in the U.S.[4] All advertisements must be identified as such in these publications. The statute is tied to mail delivery, however, necessitating new legislation to make this applicable to electronic publishing via videotex systems. The Communications Act and the FCC also require sponsorship identification in broadcasting.[5] Videotex, however, is a new medium that is neither broadcasting nor sent through the mail, so that these protections apparently would not apply.

ELECTRONIC MAIL-ORDER

This same problem of consumer protection measures being tied to a particular medium comes up in the area of direct marketing as well. If, as many experts expect, videotex is used for electronic mail ordering of retail items, the age-old consumer bane of late or non-delivery of items ordered and paid for could arise. Yet, the FTC regulations requiring marketers to ship goods promptly or give consumers the right to cancel and receive a refund, applies only to goods "ordered through the mails."[6]

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[1] Visiting Associate Professor of Law

[2] Hartley J. Moore, "New Video Technology Poses Perils for Some Advertisers," Harv. Bus. Rev. 25 (Sept. - Oct. 1981).

[3] In fact, the National Commission on Egg Nutrition is under order from the Federal Trade Commission not to misrepresent the evidence on the relationship between the consumption of dietary cholesterol, including that in eggs, and the risk of heart disease. In re Nat'l Comm'n on Egg Nutrition, 92 F.T.C. 848 (1978). Nonetheless, other trade groups could use similarly innocuous names to gain undue credibility for their advertisements.

[4] 39 U.S.C. § 4367; 18 U.S.C. § 1734.

[5] 47 U.S.C. § 317 (a)(1).

[6] 16 C.F.R. Part 435.

A seller who advertises on videotex and receives payment through an electronic fund transfer would not be subject to this important consumer protection regulation.

ELECTRONIC HARD SELL

Videotex advertising combined with an instant electronic ordering mechanism, could also give rise to impulse buying or unauthorized purchases. Yet the FTC and state regulations providing for a "cooling off" period or right to cancel apply only to door to-door or in-home personal sales[7] (although some state laws have extended this concept to telephone sales). Once again, the protection is tied to the medium, even though the problem of impulse buying in response to high pressure selling may not be limited to one medium. Information providers on Prestel have voluntarily agreed in their Code of Practice to allow consumers a right to return the goods and receive a refund within a specified time period.[8] This important consumer protection should be extended to other systems as well.

WHO IS RESPONSIBLE FOR VIDEOTEX ADS?

Finally, should videotex system operators take some responsibility for the advertisements and marketing schemes that are disseminated by them? Traditionally, the print media have strongly resisted the notion that they are in any way liable for the fraud or deception of the advertisements they publish. Broadcasters, on the other hand, have developed rather strict "clearance" procedures to screen out potentially false or deceptive advertisements. These screening procedures are particularly effective on national network television.

If videotex system operators are to gain revenues by sharing in the proceeds of videotex sales, as some have suggested, there is a strong argument that they should also share in the responsibility for possibly unfair or deceptive practices by these marketers. The videotex system operator would be in a good position to mediate between the consumer and the seller in the event of consumer complaints. At the very least, the system operator should maintain a file of the name, address and telephone number of all advertisers and retailers using the system, since an aggrieved consumer who ordered electronically may have no other way of contacting the seller whose advertisement has since been removed from the data bank.

CONCLUSION

In conclusion, then, while I don't want to sound the alarm unnecessarily or prematurely restrict a new medium with many potential benefits to consumers, I think it is important for consumer policy makers to think ahead and take the obvious precautionary measures to prevent old consumer problems from reappearing in new forms. In the alternative, industry leaders could undercut the need for any government regulations by adopting voluntarily a Code of Practice that adequately addresses these problems.

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[7] The FTC regulation appears at 16 C.F.R. Part 429.

[8] Association of Viewdata Information Providers, Ltd., Viewdata Code of Practice (1980).

THE IMPACT OF CONSUMERISM ON A DEVELOPING ECONOMY: THE CASE OF TURKEY

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ABSTRACT

In a rapidly developing, but fluctuating economy such as Turkey, the general outlook of consumerism based on most recent research data available has been reviewed. It is shown that consumers suffer a great deal of problems which are not essentially different from the ones that their counterparts face in developed countries. However, as for the causes of consumerism and consumer problems, significant differences are found. While inertia and procrastination attitude was seen on part of Governments, a strong resistance or xenophobia was found among businessmen. Much complaint but lack of active involvement was the pervasive attitude of consumers in general. It has been established that in a sellers market, for businessmen to come to grips with the realities of consumerism, it took the stagflation and recession instead of the consumer movement itself.

INTRODUCTION

Although it is not the only goal of life, consumption, or its correlate, shopping, is one of the most important activities of human life. It is a phenomenon which represents not only the material exchanges, but also the dreams, hopes, expectations and various ways of satisfaction of people. While shopping takes a great part of the consumers' time, energy and money, the things obtained or not obtained, create problems as well as opportunities and satisfaction. This is true for any economy.

However, the consequences of these problems are much more aggravated in the case of developing countries and especially that of the Third World [17, p. 17-18]. Although, with its per capita GNP at approximately one thousand dollars, Turkey can not be regarded as a poor country any more, it is still among those countries where a great many of the consumers suffer in their everyday shopping activities. The impact of the national economic environment on the Turkish consumers' welfare has not, on the average, been a favorable one until recently. Consumers in a rapidly developing, but fluctuating economy such as Turkey, have had to put up not only with scarcity, but also with high prices and low quality in every conceivable aspect of their shopping activities. The Turkish consumers' dilemma stemmed not only from the market behavior of sellers, like in developed countries, but also from the structure of the market and unequal distribution of income.

Yet, as of 1982, a tremendous amount of knowledge about consumerism, especially among the intellectual circles, the press and the Turkish Radio and Television broadcasting institutions in Turkey, had been accumulated. However, the roots of this awakening and upsurge of interest in "consumerism" under this title can only be traced back to the 1970's.

While Turkey was trying to cope with the investment, production and development problems, thanks to the entrance and rapid expansion of television and private transportation, a distorted "consumption culture" pervaded the middle and upper income stratas. The untimely entrance of this inevitable culture brought about added problems for consumers as well as producers.

Of course, before Turkey reached the 1980's, some attempts to improve the situation had been witnessed throughout the country. Although scattered and unorganized, they brought hope for the salvation of the consumers. But the real challenge of consumerism and modern marketing, backed up with the developments of the 1970's, started to manifest itself only in the 1980's, especially after the announcement of the January 24, 1980, austerity measures which were aimed at stopping the three digit inflation and eventually establishing an entirely free market economy.

THE GENERAL OUTLOOK OF THE TURKISH ECONOMY

Since the so-called non-controllable environmental factors are one of the most important determinants of consumer welfare, a brief review of the Turkish economy might help shed light on the state of consumerism in Turkey.

Since the establishment of the Republic in 1923, Turkey has passed through continuously fluctuating socioeconomic stages in discreet time intervals. From the standpoint of present analysis, these stages could be divided into the following broad areas: (1) 1923-1960, (2) 1960-1971, (3) 1971-1980, and (4) 1980-present. The first period was a trial and error approach for the development of the country. Yet, starting from 1960, each decade has resulted in inflation, social chaos and Army intervention or takeover. The second stage was the beginning of a mixed, planned economic development and a production oriented decade. Despite many domestic and internationally adverse conditions, Turkey made significant strides up until 1977. While it was on the verge of a take-off at the start of 1977, the rate of inflation soared to 132 percent, and the unemployment rate rose to 16 percent in 1980. During this third period, shortages and blackmarketing, even in vital drugs, reached unprecendented dimensions. To remedy this situation, the existing government, on January 24, 1980, started an Austerity Program which mainly consisted of a tight money policy, low wages, free and high interest rates, realistically valued exchange rates and curbed demands. But since it did not produce a quick recovery of the economy, the government was not able to cope with the ensuing social unrest, disorder, anarchy and terrorism. So another Army takeover came on September 12, 1980. In the fourth era, the austerity measures, backed by the Army, started a gradual liberation of the economy.

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Thanks to the stabilization program, the rate of inflation was brought down to 30 percent in 1982.

Along with its other deeds, however, this last era also dragged in stagflation. The period of stagflation that Turkey has currently been passing through can be characterized as an "inflation plus recession" type [24, p. 121]. During this short period, an important drop in the amount of total savings has been recorded, as they plummeted to 23.1 percent of the GNP [33, p. 25]. The banker bankruptcies, which also bankrupted thousands of consumers in 1982, contributed to the overall decline in savings [32]. In this period, not only the livelihood of consumers, but also that of small businesses, as well as some independent large corporations, have been jeopardized, which resulted in an unannounced alliance among these groups against devastating monopolies.

Each of the aforementioned eras, in their own unique way, had implications for marketing and consumerism. However, the last period is the one which has had the greatest impact. Because many industries were established during the period of easily available, low cost credit, operated behind tariff barriers, when there was high domestic demand with no real competition, they now had to adjust to the current conditions of more costly financing and a depressed domestic market demand.

THE MARKET STRUCTURE AND MARKET BEHAVIOR

In a fluctuating economy whose general characteristics are depicted above, the structure of the market and the market behavior of the firms comprising the market or industry, with few exceptions, can not be expected to be highly developed. As a matter of fact, neither the spatial locations nor social, economic or legal organization and practices of marketing activities, have reached a contemporary level in Turkey.

Today the market structure of the Turkish economy shows a dual nature which can be separated into two distinct, but interrelated parts: The modern and the traditional sector. Thus, both in manufacturing and distribution, be it state or privately owned, large enterprises and traditionally small scale establishments operate together. But in each sector, almost 90 percent of the firms are small businesses [5, p. 126, 194, 198]. On the other hand, a few large firms account for quite a substantial part of the total market in the manufacturing industry. In other words, the rate of monopolization is very high. For instance, according to research carried out in 1976 by Tekeli and Ilkin [28, p. 5], one firm in 18 sectors, two firms in 27 sectors and three firms in 14 sectors dominated the entire market. The outcries of the Istanbul Chamber of Commerce against monopolies, covered in the following paragraphs, attests to this concern.

The channels of distribution are more cumbersome than that which ideally should exist. The retail sector especially, is very crowded, more so than the other segments of the channels. Retail capacity ratios (E/C) and the number of retail establishments per 1000 population are continuously increasing [27, p. 15]. Since there have been some delays and failures in the transfer of large scale retailing technologies, i.e., supermarkets and department stores [14], and since they are still in their infancy, there are no signs of monopolization in the retail sector. Yet, the atomistic structure of the sector, with its thousands of small firms, does not allow for any kind of controls.

By necessity, the general atmosphere that encompasses these markets is the "sellers market" and "classical marketing behavior" which usually go together. The effects of these conditions are seen very overtly in almost every attitude and behavior of the businessman. For instance, it is not an uncommon event for business groups to get together for gentlemen's agreements for price fixing. Most of the businessmen have become so accustomed to the inflationary sellers market climate that even after the breakdown of this rigid structure in January of 1980, some still resist blindly and stubbornly to any adaptation to the changed conditions. Meanwhile, however, the more foresighted attempted reconciliation and adaptation to the stagflation-ridden economy. Some firms earnestly tried marketing tactics like quality improvements, extended installment sales, free home deliveries, price reductions, drawings, packaging conveniences, extended guarantees, special advertising campaigns and product differentiations which are so entrenched in the modern practices of industrialized Western countries. At no other time were they so intensely tried in Turkey, but most of these efforts succeeded only minimally because the genuine approach to consumers during a recession should have been to afford some real monetary gain. This actually finds its real expression one step further in "socially responsible marketing".

THE NATURE AND TYPE OF CONSUMER PROBLEMS

Although reflected at different threshold levels, a similarity or universality of consumer problems and/or sellers' practices and thus in the causes of consumerism can be observed throughout the world [12, 16, 21].

Major consumer problems and complaints which are identified by various research projects in Turkey over the last decade [1, 2, 3, 18, 20, 23, 26, 29] can be systematized within the context of marketing mix variables as follows:

(1) Product and Service Related Problems

Deceptive practices in quantity of goods (scaling deceits, etc.); improper, unclean, unsafe, poor packaging and no packaging; lack of standards and disobedience to standards; difficulties in returning goods and getting refunds; almost non-existent product liability; inadequacy, lack of and/or high cost of services, delays and overcharges; and poor quality.

(2) Price Related Problems

Artificially curtailing the supply and creating blackmarkets; unfair and arbitrary price increases and overcharges; higher prices and poorer quality; secret price fixings and other monopolistic tactics that eventually lead to higher prices; price discrimination by customers for the same goods at the same time; indirect or unannounced price increases by reducing the weight or contents of packages, or by adulteration; arbitrary price increases during the peak demand periods, such as holidays, etc.; inexplicably high interest rates on installment sales; fraudulent sales and price reduction prices; giving stamps, chewing gum or matches in place of monetary change.

(3) Distribution (Place) Related Problems

Inadequate distribution or delivery; long delivery hours; not selling complimentary products in the same place; environmental polluting of business locations and sites; transfer of conflicts among channel menbers to the consumers; distribution monopolies against retailers and consumers.

(4) Promotion Related Problems

Branding and labeling problems (insufficient information, lack of labels); displaying goods without price tags; overpressure to the consumers (hard-selling tactics); customer differentiation by salesmen; bait displays; deceptive advertising, and sales promotion campaigns that do not pass any real value on to the consumers.

In order to demonstrate the seriousness of the above problems, one specific example concerning product safety will more than suffice. For instance, because of unauthorized non-standard manufacturing of LPG tanks by so-called pirate or fly-by-night operators and also lack of regular maintenance, household LPG explosions each year claim almost a hundred human lives and account for many injuries in Turkey [2, 26].

The above problems which occur before, during and after purchases are, by no means, exhaustive. Of course, there are other consumer problems which probably do not properly fit into the above classification. Inflation, which is the reduction in the purchasing power of money, is one such serious problem. It affects the individual, both psychologically and physically [11]. Red tape, substandard public transportation, public utilities, housing, urbanization and hospital care are also important areas of discontent to consumers.

HISTORY AND THE DEVELOPMENT OF CONSUMERISM

As is the case in the United States, [12, 15] or elsewhere in the world, the roots of consumerism can be traced back to the dawn of history. In fact, the Hittites of Anatolia (now in Turkey) had a consumer code on food matters 3500 years ago [13].

The state of the economy, the market structure, and the above listed problems account, to a large extent, for the causes of consumerism. The developments, studied from the historical perspective which follow, also show the types of consumer policies, or lack of them, and the catalysts which helped the evolution of consumerism in Turkey.

For all practical purposes, the consumer-impinging developments in Turkey can be traced to five different periods which, in some respects, resembles similar periods in the United States [12]: (1) Period of the Ottoman Empire; (2) 1923-1960; (3) 1960-1970; (4) 1970-1980; (5) 1980-Present.

The first consumer-related policies in Turkey could be traced back to the period of the Ottoman Empire [18, p. 59]. During this period, organizations of artisans and gilds were established. The basic cause of this consumer oriented movement was to increase the prestige of tradesmen, sellers and artisans. The oldest regulation, which carried the nucleus of the most advanced consumer codes of today, dated back to 1630 [18, p. 65].

The second period, as was mentioned in the economic outlook of Turkey previously covered, was a time of struggle, of standing firm and persevering. But especially during the 1930's, under the rule of Ataturk, many foresighted consumer protection laws, which today can only be found in the most progressive consumer protection codes of developed countries, were enacted [26]. Above all, the State Economic Enterprises were set up as a market regulation force.

Most of the above laws are now outdated and inoperative. Also, some of them were abolished after the January 24, 1980, measures were instituted.

The period between 1960-1970, supported by planned economic development, is an era which represents Turkey's outward orientation that resulted in increased economic, cultural and social exchange. During this awakening process, some more laws which have an effect on consumers were passed [26].

Although the beginning of this intensive production-oriented period seemed promising, few achievements resulted as far as consumerism is concerned. However, the issue of consumerism found its way into the 1970 Program of Second Five Year Development Plan. This program emphasized the need for consumer protection through every means, including the formation of a responsible unit within the Ministry of Commerce. It provided the impetus for consumer associations, and advocated educational measures as well as quality and price controls.

The fourth period (1970-1980) was the start of a period in which some small, but significant, strides were made in favor of consumerism. In fact, the year 1970 could be regarded as a turning point of consumerism in Turkey. At this juncture, Turkey unavoidably stepped, to a certain extent, into a marketing era which largely can be characterized as an "intensive classical marketing era" which is something better than the "pure selling era". Taking into account the decrees of the Plan, the Ministry of Commerce arranged a Consumer Problems Seminar in 1970 in Ankara [34]. This was the first real milestone of consumerism in Turkey. Later, the Ministry of Commerce established a Department of Consumer Problems in order to provide more direct means for assuring the expression of consumer viewpoints. Because this unit was never successfully organized, it was abolished in 1974. However, while established it did study the consumer codes and practices of other countries and provided for participation in the European Council, as well as OECD committees on consumer problems. It helped with the preparation of a bill entitled "The Bill of Regulating Trade for Consumer Protection" in 1971. It remained in the Parliament a year, but did not pass due to certain pressure groups. After the first bill was introduced, three more legislative attempts for consumer protection took place, but none of the four bills were enacted [22].

The main developments favoring consumers during this period can be summarized as follows:

- Arrangement of an unsuccessful meat boycott.
- The Price Control Committee Resolution Act, 1975.
- A consumer seminar held in 1976 at the School of Business of the Istanbul University.
- The newspapers started to devote more coverage to consumer-related problems.
- The Turkish Marketing Association included an article in their code for consumer protection.
- The School of Business at Ege University made preparations to establish a Research Institute for Consumer Problems and an Association for Consumer Protection.
- In 1977, an Association for Consumer Protection was formed in Ankara.
- The Istanbul Chamber of Commerce opened a bureau for consumer complaints.
- A circular of the Turkish National Committee of the International Chamber of Commerce, calling for observance of the International Code of Advertising Ethics, was published.
- Some LPG firms, in response to accusations, inserted ads, providing explanations to customers.
- Chambers of Commerce provided ads to enlighten consumers on sales and discount practices.
- Some volunteers participated in IOCU Congresses.
- A Foundation for Consumer Protection was founded.
- Two dissertations, three books and countless articles were published.
- A few radio and television programs were produced.
- The Fourth Five Year Development Plan (1979-1983) re-emphasized the need for consumer protection [9, p. 280].

The most noteworthy incident during this period was the price control experiments which turned out to be a complete failure. For, instead of controlling prices, the committee served as a compass for price increases.

None of the above activities were effective and fruitful as far as establishing and/or keeping in operation a concrete consumer organization which would strive for the rights of consumers. However, this was a period of maturation and crystallization of knowledge and provided experience for the future.

The final period, starting with 1980 and continuing to the present time, is the beginning of noteworthy developments for consumerism in Turkey. Because of the macro level developments described above, there has been an increase in the tempo of consumer-related events since 1980. These events are as follows:

- The State Planning Organization, the Union of Chambers of Commerce and UNIDO have planned to establish a foundation for quality control.
- One highly circulated newspaper established a bridge between sellers and consumers for arbitration in 1981.
- The Istanbul Chamber of Commerce has started pressing against monopolies, asking for anti-trust laws and resorting to imports in an effort to combat monopolies [30, p. 1].
- The Second Turkish Economic Congress (1981) extended greater consideration to the issue of consumerism [20].
- In addition to the Istanbul Chamber of Commerce, various other pressure groups pressed heavily for the inclusion of an anti-trust article in the new Constitution [6, 10].
- The Turkish State Cigarette Monopolies were required to put warning labels on the packages.

During these developments, the fourth and last bill for consumer protection went back and forth between the Government and the Consultative Assembly. The general attitude of some circles toward the issue was that "it is not the right time" and "the people are not ready for it", etc. When all hopes seemed lost for the passage of the consumer bill, a sudden and unexpected move came from the Consultative Assembly on August 26, 1982. The Assembly adopted an article pertaining to the protection of consumers in the new Constitution. In draft form, the Article read as follows: "The State shall adopt measures to protect and enlighten consumers and encourage the initiatives consumers take to protect themselves." But a direct and explicit proposal for the State to encourage consumers to head up organizations was rejected on the grounds that organizations of consumers might give way to activities that would be destructive for the system [3].

SUMMARY AND CONCLUSIONS

The above explanations clearly show the trials, setbacks and progress which has been encountered by the consumers to date in their efforts toward consumerism.

Although there was a time lag, the most striking impact of consumerism in Turkey was the last minute adoption of an article on consumer protection in the new Constitution. However, if one remembers that passage of the Truth-in-Packaging Law of the United States took five years [16, p. 577], it would appear that delays and postponements in consumer legislation hold true also for countries other than Turkey. It is a problem that merits further scrutiny.

Although it should be apparent from the experience of industrialized Western countries where consumerism has taken great strides, legislation as an end in itself, is not a panacea [16, p. 575]. Still, the inclusion of the article on consumer protection mentioned above, after years of struggle, can be regarded as a silent victory for consumerism. Its significance and implications stem from the fact that from now on, the issue of consumerism will always remain uppermost and fresh on the agenda of society.

The fact that Turkey was progressing toward consumerism while at the same time encountering opposition to consumer organizations by some appears paradoxical and anachronistic. Yet in this age it is an indisputable fact that consumers, whose rights were firmly expressed by JFK in his 1962 speech, are the real addressee of the case of consumerism. So, if the consumers who are a natural member of the channels of distribution and who meet the sellers everyday, can not organize and express their rights, who else can properly represent them. The failure of the consumers in establishing and developing their own organizations up until the present in Turkey may constitute one of the fundamental differences between the characteristics of developing and developed countries in the marketing arena.

The most recent research data [18, 23, 26] shows that the failure on the part of the consumers in becoming organized is attributable partly to the lack of government support and partly to the lack of an active interest among consumers themselves generally. The research further indicates that sensitivity to the consumer problems and unchanneled complaints are widespread among all of the social classes. But a somewhat more active reaction and responsiveness is more pervasive among the "middle middle" and "upper middle" classes. As for the rich, they have the ability to repurchase, and their chances of being deceived appear to be less than with the lower and middle income groups. Even when they are deceived, their loss is not as greatly felt as with the other classes. The above research data establishes, once more, that the lower income stratas can not spend the time, energy and money to suit the sellers. They also know from experience that so-called control authorities can do very little for them. The results of this research show surprising similarities with the results of a research on "The Evaluation of User Satisfaction in Consumer Protection Hotlines," by Lippert and MacDonald [19]. Although no such hotlines, except at holidays, exist in Turkey, like agencies to which trampled consumers can resort have not proven helpful at all. Even were consumers to apply to these places for redress, they would not receive proper attention because they are inadequately organized to overcome these types of problems. Besides, under the present atomistic structure of the markets, it would be impossible for authorities alone to control effectively, thousands of small and scattered firms.

As for the businessmen, they, with few exceptions, did not welcome the wave of consumerism. This was partly due to excessive production orientation and the classical marketing organization, and also the result of ignorance and unwillingness emanating from shortshightedness on their part. Most of them were, and some of them still are, very frightened by this new movement. Thus, they implicitly or explicitly tried to deny and overlook consumer issues, without contemplating the effect of this apathy for the future. The psychodynamics of their behavior were conservatism, offensiveness, xenophobia, procrastination and inadequacy of social consciousness. Ignorance and lack of contemporary international orientation have also played some role in their behavior.

However, it was not the consumer movement which really stimulated businessmen in Turkey to become consumer oriented. Although warned far in advance by the pioneers of the consumer movement of this prevailing trend toward consumerism, it was the new economic climate, the stagflation and the free economy which brought the businessman to grips with the realities of modern marketing. And it was not until the urgent need for increased exports developed, that they perceived of the advantages of being quality conscious. This newly developed mentality and thrust toward quality improvement, together with increased competition, at last permeated the domestic markets. In addition, there was the realistic challenge to reverse the trend of the people which had withdrawn to a "voluntary simplicity" [24], now more than ever due to their rapidly dwindling incomes. If a contribution of consumerism has ever taken place in this setting, it might have only been an accelerated enlightening effect. Yet, although at a different threshold level, the same holds true for the developed countries of the 1980's. One of the most important concerns of top management in these countries and especially in the United States during the 1980's, is toward a more intensified consumer orientation [35, p. 15] in all aspects of business life.

However, from the viewpoint of consumers in developing countries like Turkey, the coincidence of stagflation, rising consumerism and new legislation may be regarded as a fortunate event for all the concerned parties because it may help pave the way for a hand-in-hand growth of the industry and consumerism.

The developments in lower income countries like Turkey also points out the need that not only the consumers but also the businessmen should be educated and enlightened about consumerism in these countries. This is another fact which seems not much relevant in developed countries.

Although there are significant differences in causes of consumer problems between developing and developed countries, the types of problems encountered in both really needs further scrutinization in an effort to find the universalities. As for the underlying causes of consumer problems in Turkey, lack of orderly economic development and unequal distribution of income come first. Under the circumstances, the policy and the program of action for the consumer movement should have two simultaneous points of attack in Turkey [26]:

(1) To press for a balanced economic development and income distribution, which is actually one of the goals of consumerism defined in broader terms [12, p. 187]. To effectuate this, rationalization and modernization of the market structure and channels of distribution without monopolization is a must [26]. Because, since big monopolies can impose almost all of their policies on small scale traditional retailers by using "pushing and/or pulling" marketing strategies, the only way for retailers to escape from this is to come forth as, to use J. K. Galbraith's words, a "counterwailing power." And only in this way can a marketing democracy based on multiple dialogs be established.

(2) To press for the solution of consumers everyday nerve-racking, and sometimes life claiming, problems which are in the realm of narrow concept of consumerism but that are essentially very much interdependent with the broader notion. While this second point of attack is a rather short term approach it may also help redirect the long term developments.

The need for a coordinated consumer act in order to support the above measures is beyond any dispute. It is now also going to be obligatory in accordance with the article adopted in the new Constitution. Such a code is important not only for demonopolization of big monopolistic firms, but also for conforming to the international code of consumerism that is rapidly developing in EEC, OECD, U.N. and the rest of the world.

The aim of consumerism in the long run, however, should be to help the creation of a world in which the need for consumer protection is either completely removed or reduced into the minimum levels.

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KENYA COLLEGE STUDENTS'
CONSUMER KNOWLEDGE AND ATTITUDES

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ABSTRACT

The study was designed to measure the consumer knowledge and attitudes of college students enrolled at a college in Kenya. It was tested whether six variables (sex, academic level in college, academic major, rural or urban upbringing, having work experience and having completed a course in consumer education) were associated with achievement on a 47-item test or with seven consumer attitude questions. During the first week of classes in 1980, all available students (n = 508) completed the instrument. The mean score on the achievement test was 31.3% (67.9%) correct. Prior completion of a consumer education course and academic major of the student were significant determinants of test achievement. In general, the students supported attitudes expected of rational and responsible consumers.

INTRODUCTION

Kenya is a rapidly developing African country that is still largely an agricultural economy. Agricultural production accounts for 90% of Kenya's exports and for a third of both the gross domestic product (GDP) and paid employment. Sixty-five percent of farming is made up of subsistence farms and the rest are large scale and small scale farms. Small scale farms are those between 40 and 300 acres; large scale farms are those in excess of 300 acres. [10]

Market or monetary transactions in Kenya are slowly becoming commonplace as consumers are increasingly being brought into a market/money economy. An average consumer in Kenya is very ignorant about consumer practices in the marketing/money economy. Increased commercialization, including advertisements and mobile product promotion films, have fostered various consumer problems. In the marketplace consumers are faced with false and misleading advertisements, multiple product choices, limited product information and occasional unscrupulous selling practices. The ordinary individuals who do not know their rights as consumers living in Kenya often are exploited by sellers.

Consumerism is a relatively new concern in Kenya. Since independence in December of 1963, the Kenyan government has tried to help consumers. To date five consumer protection laws have been enacted. They are related to product safety, product quality, price control, and fairness in dealings between consumers and businesspersons. Available redress channels also have been established by the government. Unfortunately most Kenyans are not aware of these consumer protection efforts. One group that represents the interest of consumers is the Kenya Consumers' Organization. This organization was started about thirty years ago by a group of housewives in Nairobi who felt that shopkeepers were exploiting consumers. The objectives of this voluntary, non-profit organization include consumer education and awareness, representation of consumer interests to business and government, and complaint resolutions.

The educational system in Kenya starts with primary school. Seven years of primary school are followed by four years of secondary school. After primary school, all children are administered a national examination called the Certificate of Primary Education (CPE). According to The Weekly Review, in 1980, 327,973 children sat for this examination. Presently 60% of the population in Kenya is below the age of 18. The secondary school system (grades 8-11) cannot absorb all these children. A combination of the publicly and privately funded schools totaled a capacity of 123,214, leaving 204,759 pupils without a place in a secondary school. Consequently, children who do well on the CPE exam attend secondary school; others join vocational training schools or are left at home idle. [6, p. 19].

After four years of high school education another national examination is administered. Based on these scores a limited number of the students are placed into institutions of higher education. Some go to the University of Nairobi while others attend various specialized institutions like teacher training colleges, nursing schools and agricultural institutions.

One of the five agricultural institutions is Egerton College located in Njoro, Kenya. It offers training in the following disciplines: Agricultural Education and Extension, Agricultural Engineering, Animal Science, Crop Husbandry (Agriculture and Horticulture), Dairy Technology and Food Technology, Farm Management, Home Economics, and Range Management. The students at Egerton College are trained for three years and then work as extension officers. Their efforts are directed at the 80% of the population living in the rural areas.

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The government officials who most often come in contact with rural families are the health officers, social workers and agricultural extension officers. Among these, the agricultural extension officers are the most appropriate people to teach consumer education to these rural families. This is because their training includes various aspects of production, consumption, marketing, budgeting, and accounting. Therefore, if they can educate rural families to be good consumers, the impact on the welfare of these families and on the economy of Kenya is potentially widespread.

RESEARCH PROBLEM

For the purposes of this research Egerton College was chosen as one of five schools which trains agricultural extension officers in Kenya. Students attending Egerton College, Njoro, Kenya, were the focus of this study. They were a convenient population because the primary researcher was a staff member there but also they were a national group of students attending this agricultural college. While at Egerton College, the only students who take a course in consumer education are the Home Economics students and the Dairy and Food Technology students. But, if consumer education were taught to all students at Egerton College, graduates could later teach the farm families both improved agricultural practices and wise consumer practices.

The problem of this research was to assess the degree of consumer education knowledge and related attitudes of students at one school involved in training agricultural extension officers. Additionally, in an exploratory attempt six null hypotheses were examined associating consumer knowledge or attitudes with the six variables of sex, academic level in college, academic major, rural or urban upbringing, previous work experience and prior completion of a course in consumer education.

RESEARCH DESIGN AND METHODOLOGY

The methodology utilized a researcher developed questionnaire which was administered to a large sample of students. The instrument was designed to ascertain selected demographic information and general consumer awareness, in addition to consumer knowledge and attitudes.

A consumer education course taught at Egerton College served as the basis for developing the questionnaire. Logical or content validity was achieved by matching the consumer education course outline with the breadth of questions on the test. Content areas included consumer rights and responsibilities, budgeting, intellectual buying, advertisements, banking and insurance, credit, consumer laws in Kenya, and the role of the consumer in the economy. Various administrators and faculty at Egerton College reviewed the development of the instrument in an effort to establish construct validity with assistance from faculty in the U.S. with expertise in test construction.

Nine questions were asked regarding demographic data. Four general information questions requested information on awareness of Kenya consumer legislation, an opinion on what groups in Kenya need consumer protection, and whether or not the respondent had completed a college-level consumer education course. Forty-seven questions measured knowledge including 22 true-false questions and 25 multiple choice items. Seven attitude questions using a four point Likert-type scale assessed opinions.

Fifty students from Egerton College were involved in a pre-test of the instrument during the spring of 1980 to assess and improve reliability. Those questions that were found to be ambiguous, too easy or too difficult, or not appropriate were either eliminated or rewritten.

Usable data were collected during the first week of classes, September 5-9, 1980. A total of 713 students were available for testing, however, students who were part of the pre-test were excluded from data collection (n = 50). Of the remaining 663 students eligible for the study, 508 (76.6%) participated. The missing 155 students were unable to sit for the data collection because they were not Kenya nationals and were excluded. All questions were coded for computerized statistical analysis. Analysis of variance procedures were used to determine relationships between the knowledge score and the descriptive variables. Relationships between the attitude questions and the demographic variables were tested with chi-square procedures. The level of significance was set at .05.

FINDINGS

The findings of this study describe the students at Egerton College, their measured consumer knowledge, reported attitudes and some related general consumer information.

Egerton College Students

Of the 508 respondents, 31.6% were first year students and the rest (68.4%) were second and third year students. The majority of them (83.7%) had enrolled at Egerton College with no previous work experience; students who had prior work experience made up 16.3% of the population. Most of the students were unmarried (80.9%); male students (74.4%) were predominant.

For a majority of the students their families resided in rural areas (79.2%) rather than urban. In terms of ages, 36.4% were 21 years or younger while over half (58.5%) were between the ages of 22 and 27.

The data also indicates that over half (53.2%) of the respondents' fathers had no formal education while 34.7% had some formal education (Ordinary Level Education or Certificate of Primary Education). Only 12.1% of the fathers had received an Advanced Level Education or possessed a college degree.

General Information

Four multiple choice questions were included to gather supplemental general consumer information from the students. For the first question regarding "which consumer group requires the most protection from the government," the majority of the students (60.6%) responded "poor people because they have limited resources." The response selected by 25.7% of the respondents was "children because they are too young to know the truth." Over ten percent (11.2%) reported "urban people because they are faced with multiple choices in everything they buy." Less than one percent responded "shopkeepers because Kenyan consumers like to bargain."

The second question assessed the students' prior awareness of the five consumer protection laws mentioned in the questionnaire. They included the Price Control Act, the Trade Description Act, the Sale of Goods Act of Kenya, the Food, Drugs and Chemical Substance Act and the Weight and Measures Act. The results indicate only 79.8% of the respondents had previous knowledge of at least one or more consumer protection laws. Nearly half of the students (43.8%) were aware of from three to five laws.

The third question asked the students to identify sources of information that contributed to their awareness of the legislation. Almost two-thirds (64.6%) reported they gained knowledge of consumer protection laws through newspapers and radio.

The fourth question assessed the number of students who had previously completed a consumer education course. Less than twenty percent (17.1%) of the students had completed a consumer education course; this equaled 87 students. Most students (398) had not completed such a course; twenty-three neglected to answer.

Consumer Knowledge Section

The mean score on the 47 knowledge questions was 31.3; this represents 67.9% correct. This was considered a moderate level of achievement.

Analysis of variance procedures indicated that the respondents' sex, academic level, prior work experience, and rural or urban upbringing were not related to achievement on the 47 knowledge questions. Prior completion of a consumer education course was significantly associated (p =.001) with higher scores on the test. Academic major of the student was another significant determinant (p = .001) of test achievement. Students majoring in Dairy and Food Technology as well as Home Economics received higher mean scores on the test than students in other majors.

Consumer Attitude Statements

Responses to the seven attitude questions indicated that these Kenyan college students strongly supported attitudes expected of rational and responsibile consumers. Each statement was individually analyzed by chi square procedures to determine relationships between the responses and five independent variables. (Data analysis difficulties resulted in a failure, and remaining inability, to contrast attitude statements with the independent variable of academic major.) Academic level of the student did not contribute to a difference in the expressed attitudes. However, prior work experience, family's place of residence, sex of the respondent, and whether the respondent had completed the consumer education course did significantly contribute to differences in the attitudes expressed.

One of the questions elicited significantly different responses on each of these independent variables. An attitude question addressing the moral role of the consumer in the marketplace described a shopping situation in which an individual purchased a kilo of sugar and was undercharged by 10 shillings. Respondents were asked if they agreed or disagreed with the individual's behavior of keeping the extra change.

Female students apparently felt more strongly than male students as 72.4% of the females responded "strongly disagree," while over half of the males (58.0%) expressed strong disagreement. Similarly, more students with no previous work experience expressed strong disagreement (63.9%) than those with prior work experience (51.9%).

More than twice as many urban students (26.7%) as rural students (10.3%) expressed strong agreement with this statement. However, the majority of the students from urban (57.1%) and rural settings (76.8%) generally disagreed with this statement.

Prior completion of a consumer education course also significantly affected the responses. Among those who had completed a course 19.5% expressed agreement with this questionable consumer action while 80.4% disagreed. Responses from those who had not taken a course totaled 27.8% and 72.2% respectively.

Thus it can be observed that the Egerton students generally disagreed with this irresponsible consumer behavior. However, the descriptive variables contributed significantly to the individual responses.

Previous work experience and place of family residences were factors that significantly influenced the responses to a question focusing on consumer marketplace responsibility. The question described a consumer who had purchased a moldy food product and discarded it rather than returning it to the shopping center five miles away. The consumer "decided to throw it away and call it bad luck." The question stated "this is how a consumer should behave" and asked the respondent to agree to disagree with the decision.

It is interesting to note that more of the students without previous work experience (72.0%) disagreed with this irresponsible consumer behavior than those with previous work experience (65.4%). Almost three-fourths (73.9%) of the students from rural upbringing disagreed with this statement in contrast to 61.5% of the urban students who expressed disagreement. For the same question 12.5% of the rural area students "slightly agreed" compared to 23.1% of the urban students.

Responses to the statement "advertisements usually are misleading and deceptive" were significantly influenced by prior completion of a consumer education course. Among the students who had completed a course 81.6% agreed with the statement and of those who had not completed a consumer education course 66.1% expressed agreement.

Another opinion question dealing with advertisements indicated that advertising adds to the price of consumer goods and "to bring prices down all forms of advertisements should be stopped." Prior work experience was a significant determinant of responses to this question. Most students disagreed (62.2% of those without prior experience and 59.3% of those with experience.) However, 36.6% of those without work experience "strongly disagreed" with this statement in contrast to 24.7% of those with work experience.

In summary it can be observed that this group of Egerton College students generally disagreed with irresponsible consumer behavior such as failure to return excess change or faulty products. They agreed that advertisements were often misleading and deceptive, but should not be discontinued. Various descriptive factors influenced the responses to the attitude questions.

CONCLUSIONS AND IMPLICATIONS

Some general conclusions can be drawn from this study which have important implications for Kenya. The students exhibited a moderate level of consumer knowledge as measured by this instrument. Previous completion of a consumer education course significantly influenced the knowledge level and attitudes expressed by the students. This, of course, was to be expected. Furthermore, the students, in general, expressed strong support for the attitudes expected of what could be called rational and responsible consumers. They acknowledged an awareness of Kenyan consumer protection legislation and attributed the media with providing this information.

Since 60% of the population of Kenya is below the age of 18, great stresses are ahead for the government. They must deal with the issues that will determine the future economic and social development of that country as these young people mature. Each level of the educational system is presently overcrowded, thus hindering substantial improvement in the basic and professional education of the citizenry. It is well known that economic growth is closely associated with technological advances, and both hinge on education. The findings of this study address several important facets of this impending situation.

Students graduating from Egerton College undoubtedly include many future leaders of Kenya. They also represent some of the small minority of educated citizens in a country where placement in an already overtaxed educational system is very competitive. If their personal consumer education knowledge can be increased while enrolled in the educational system, then it is likely their own expectations for the future of consumer literacy for the people of Kenya will rise.

Furthermore, the Egerton students in their occupational roles as extension officers will be in positions to influence change in a positive manner. Their education and professional position could enable them to serve as liaisons between the largely uneducated rural population and both the government and business communities to foster reasonable social and economic change. This benefit likely could accrue as a consequence of all students at Egerton College and other agricultural institutions, regardless of major, being required to take a consumer education course.

The students at Egerton College demonstrated a moderate knowledge of consumer education and presently possess attitudes expected of rational and responsible consumers. This is a credit to the educational system they represent. These attitudes seem to imply that the students are likely more willing to influence reasonable changes in the institutions of Kenya to assist all consumers.

Since the majority of the population is of school age and must pass through an educational system stressed with substantial enrollments at every level, some mechanism for providing consumer education to the general populace is needed as many school age youth are not in school. If more resources become available, expanded primary and secondary school systems could include consumer education. If the educational system is not expanded, the growing population of Kenya means that increasingly larger numbers of students will be prohibited from continuing their educational studies. This is another justification for requiring all agricultural extension officers to complete a consumer education course. Officers thus educated could provide families with needed consumer information in various adult education and out-of-school youth programs as well as agricultural information.

Kenya is recognized as a country of political and economic stability in a continent sometimes characterized by instability. This stability should enable Kenya to continue to provide respected leadership and effectively deal with the changing nature of its economy while maintaining the government's serious interest in the welfare of the consumer. A conclave of government officials, business representatives and educators perhaps could meet several times to develop a master curriculum for consumer education and explore methods of implementation into the educational system. The media, which was acknowledged as a widespread source of consumer information, also could be utilized for educational efforts. The International Organization of Consumers Unions' office in Malaysia and the Kenya Consumers' Organization could serve as resources.

But the question must also be asked, why is consumer education so necessary in a country where simple bartering is still a common procedure? The migration of Kenyans to the urban areas is increasing the demand for goods and services in a marketplace that is becoming more complex and dependent upon money. Also, economic growth is increasing the desire for goods and services in the rural areas. Consumer education has the potential to benefit both the individual and the economic system. Consumer satisfaction can be increased through more informed buying as well as a recognition of individual needs and resource constraints. Apart from these efforts being felt at the micro-level, there is no question that the macro-level will also benefit from the increased participation of informed consumers in the general economy. Increasing industrialization in an atmosphere of growing interest in issues affecting consumers may well provide the mix for a more functional market economy. Consumer legislation and redress systems have already been established by the government. Effective consumer education may enable Kenya to avoid some of the consumer mistakes made in the industrialized world and provide enlightened leadership to many other developing countries.

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A COMPARISON OF CONSUMER AFFAIRS IN SCANDINAVIA AND THE U.S.

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ABSTRACT

Consumer affairs in Scandinavia including the countries of Denmark, Sweden, and Norway are contrasted with those in the United States. The direct learning experience in Scandinavia presented here was obtained through seminars, discussions, and interviews with Scandinavian consumer officials and from consumer publications of the respective countries. The Consumer Ombusdman idea in Scandinavia with its legal approach in enforcing consumer laws make a unique contribution to consumer affairs. The Scandinavian countries continue to search for ways to preserve a significant amount of freedom of choice for the individual while seeking ways to minimize the hidden dangers which come with such freedoms. That balance between the demands for consumer protection and preservation of the right to free choice plus the efforts to achieve it should be of continued interest and importance not only to the American consumer movement but also to other consumer movements throughout the world.

A study tour to the Scandinavian countries in 1982 provided an opportunity for the writer to discover the political-cultural framework within which consumer activities operate and then to compare them with the United States. The countries visited were Denmark, Sweden, and Norway. The Scandinavian countries are regarded as leaders in consumer affairs, and the Consumer Ombudsman idea with its effective legal approach in enforcing consumer laws --an approach lacking in many countries--also makes a unique contribution to consumer affairs. The direct learning experience in Scandinavia presented here was obtained through seminars, discussions, and interviews with Scandinavian consumer officials and from consumer publications of the respective countries. Although there are similarities among the three countries, there are also differences in relation to consumer affairs which reflect the uniqueness of each country.

DENMARK

The Danish Government Home Economics Council is financed entirely by public funds and is under the jurisdiction of the Ministry of Commerce. Its aim is to uphold and improve nutritional, hygienic, economic and technical standards in Danish households in the interest of the community in general. The Council began in 1935 and is now serving a population of 5.1 million including 1.9 million households. Their testing program is similar to that of Consumers' Union in the United States. If it is not possible to test all products available on the Danish market, they test those brands most widely sold, those of special interest to the consumer, or those widely advertised. Testing of foods includes bread, frozen fish, soft drinks, and ready-cooked dishes with emphasis on economy, nutritional value, and taste, as well as on the amount of time and labor saved for the consumer. The Council cooperates with the European Testing Group in the testing of radio, cassette recorders, TV sets, knitting machines, sewing machines, etc., and with Sweden and Norway so that technical tests on vacuum cleaners may be conducted in Sweden, the practical tests conducted in Norway, and the final report written in Denmark.

Their information service consists of periodicals and booklets, daily and weekly press, radio and television, and direct contact with consumers. A large amount of information is spread through domestic science teachers, consultants, and the schools. Their publication, called Advice and Results, is issued eight times a year and rates products as "acceptable," "good," and "not acceptable." They publish many booklets similar to those of the Cooperative Extension Service in the United States. Titles include "On Living Alone," "Simplifying Housework," and "Spot Removal". Additional teaching materials include slides, flipovers, and overheads. They arrange lectures for pensioners, kindergartens, nursery schools, as well as exhibits in shopping centers of major towns. A small department has been set up to handle housing questions, and, in 1975, an exhibition was arranged concerning the modernization of kitchens and bathrooms.

The Council participates in the International Organization for Standardization and is a member of IOCU (International Organization of Consumer's Union). They also cooperate with the FAO (Food Agricultural Organization), the Nordic countries, which include Iceland and Finland in addition to Denmark, Sweden, and Norway; and they recently have established an Energy Saving Commission to serve consumers.

Out of a possible 300 items suggested by the Social Democratic Government for testing, the Council chooses those appropriate to their resources. Recently the work load has increased, while the resources to accomplish the work have decreased. In Denmark, as in the United States, there seem to be lower quality consumer products at higher prices. Members of the Council have difficulty keeping up with consumer events in the United States because of the lack of time.

The task of the Danish Institute for Informative Labeling, a privately-run institution financed by licenses, private funds, and a government subsidy, begun in 1957, is to promote voluntary use of informative labeling of consumer goods sold in retail trade. The purpose of informative labeling is to guide the consumers' choices by providing them with useful facts concerning the contents and features of the product. A special label called Varefacta (Facts About the Product) is attached to those goods meeting minimum standards set by the Institute. The label, known as DVN for Dansk Varefakta Naevn, does not mean high quality or approval of the product or the company as such, but only that minimum standards have been met. Those companies who wish to use the DVN label must ask for a permit and pay a fee. The labeling permit may be withdrawn if its use is abused. The DVN is somewhat similar to seals of approval in the United States such as the UL Seal of Approval for electrical appliances. However, the DVN is more inclusive since it can be placed on food groups, home furnishings, clothing, household equipment, sport goods and toiletries; the United States seals are not so inclusive.

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Symbols are used to guide consumers in caring for the product rather than words as is common in the United States. For example, a picture of an iron with three dots on it would indicate that the temperature for ironing is 200 degrees Centigrade; two dots, 150 degrees; and one dot, 110 degrees. No iron is to be used on any garment bearing a label which shows the iron crossed out. Both countries face the problem of labeling the interaction of one drug with another. Recently the U.S. Food and Drug Administration asked the Danish Institute for assistance in the labeling of its products.

The Danish Consumer Council is a non-party organization independent of public authorities and of trade and industry. Founded in 1947, its objective is to protect consumer interests through an active consumer policy. They receive a government subsidy and private contributions. Five main goals of the Council are: 1) to inform public authorities, trade and industry, etc. about consumer views, 2) to represent consumer interests on committees, 3) to promote standardization and informative labeling of all kinds of products, 4) to promote a coordinated consumer service, and 5) to cooperate with consumer organizations in other countries. They hold four to six meetings a year, as well as an annual meeting. Any interested person may become a member of the Consumer Council by paying dues. There is no age limit, but a member must be at least 15 years of age to vote. The Council promotes the consumer's right to safety, the right to be informed, the right to choose, and the right to be heard just as we do in the United States. Their publication titled Think, published 10 times a year, includes results of comparative investigations of qualities and prices, deals with questionsof services, public and private, and debates advertisements. Much of the material from this publication is reprinted in the press and is reported by radio and television. Since 1964 the magazine has accepted no advertisements.

The Danish Consumer Complaints Board Act was passed in June, 1974. Since that time, the Council has operated a complaint center. The Minister of Commerce controls those complaints which may be brought before the Board. They handle complaints both by phone and letter and have been quite successful in resolving them. Local consumer groups have been set up in many towns, and an attempt has been made to serve both the rural and urban populations. There is a specific complaint form which is filled in by the consumer. The form enables consumers to be specific about their complaints and encourages them to put it into writing. Since 1973, the Council has tried to work on legislation for something like the 1969 Truth in Lending Act passed in the United States but has been unsuccessful in its attempts. Although the Council feels that it is successful in much of its work, it also feels that while the consumer information is good, it is not enough. A greater effort needs to be made to encourage people to use the information provided them.

The state institution known as the Consumers' Ombudsman was established in 1975. The ombudsman takes action in cases which violate regulations laid down in the Marketing Act. The Danish Marketing Practices Act, passed in June, 1974, encourages the use of proper marketing practices. No gimmicks, gifts, stamps, coupons, or lotteries are allowed. This is in contrast to the United States, where sweepstakes are still common even though some legislative attempts have been made to outlaw stamps and gimmicks. The Consumers' Ombudsman possesses the qualifications and fulfills the general conditions necessary for appointment as a judge. He tries cases in the Copenhagen Maritime Commercial Court, and the decisions made there are final. Decisions cannot be appealed, and violators may be fined, ordered to serve a mitigated jail sentence not exceeding six months, or sentenced to ordinary imprisonment not exceeding two years. There is no small claims court or class action suit in Denmark, but they are looking into possibilities of using these. They prefer to negotiate instead of taking cases to court. However, the Consumers' Ombudsman seems to be moving in the direction of using the legal system to solve consumer problems.

Denmark differs from Norway and Sweden in two ways: 1) it is a part of the European Common Market and 2) it is the first Nordic country to propose a Consumer Product Safety Law patterned after that of the United States. The Scandinavian countries regard the United States as a leader in product safety.

SWEDEN

Sweden, a country about the size of California with a population of eight million, has a social democratic atmosphere. The National Swedish Board for Consumer Policies determines the direction of consumer activity. This Board is the central authority responsible for consumer affairs, its purpose being to support consumers and strengthen their position in the market. The Director-General of the National Board is also the Consumer Ombudsman. In cases of minor importance, the Consumer

Ombudsman can himself issue prohibition injunctions and information injunctions where he thinks fit. If a matter cannot be resolved by negotiation or by the approval of an injunction, the Consumer Ombudsman may bring an action in the Market Court, presided over by a government judge. If the Market Court sanctions the Ombudsman's recommendation, it issues a prohibition or an injunction against a trader and normally lays down the conditional penalty. There is no appeal against decisions made by the Market Court. The finality of these decisions is in contrast to the United States, where it is difficult to enforce market decisions.

If a case involves an important principle and if the Consumer Ombudsman wishes to make it a precedent, he may take the case to the Market Court even though it could have been settled by negotiation. A trader may be fined or imprisoned for certain actions, especially for misleading descriptions which are likely to affect the demand for a commodity or service.

The Ombudsman also has jurisdiction over the Marketing Act, the Unfair Contract Terms Act, and the Consumer Credit Act.

The Marketing Act relates to actions by a firm or some other trader when marketing goods and services. The trader must reveal the fact that a commodity will not stand a certain kind of usage, and if the product is harmful, its sale may be prohibited.

The Unfair Contract Terms Act was passed to protect consumers against unreasonable contract terms used by traders, especially in standardized contract forms such as sales contracts, order forms, and guarantees.

Section 7 of the 1979 Consumer Credit Act requires the trader to demand a deposit normally equaling 20% of the cash price. This is done to prevent impulsive buying, and it also serves to reduce the credit given and the cost of credit to the consumer. The consumer is permitted to trade in an item as part of the cash deposit. In the United States, credit purchases are frequently made with no down payment. Sweden's success in achieving such a credit act is in contrast to Denmark's situation.

The National Swedish Board for Consumer Policies consists of two Departments of Survey and Negotiation concerned with the areas of production in the home, including food, clothing, household appliances, and other domestic aid, housing, transportation and other consumption such as insurance, bank services, health, and culture. Credit purchases common to all four areas are also dealt with here.

In addition, four divisions conduct negotiations and investigations. The Technical Division tests consumer products. Tests may vary from an examination of doll safety to the complicated testing of household durables.

The General Division is responsible for three units: 1) distribution and household economy, which includes the Council for the Sparsely Populated Areas. This Council insures that the more isolated people have goods and petrol; 2) education and research, which includes efforts to improve consumer education activities in schools and in higher education; 3) consumer activities carried out by the local authorities and the regions. Local authorities already have Consumer Counsellors; however, this unit stands ready to advise and assist in local and regional matters.

The Information Division's purpose is to make people aware of circumstances that have a bearing on consumer policy. Their publication, Advice and Results, reports test results and market surveys. Articles deal with such topics as "Bicycle Safety", "Convection Ovens", and "Use of Credit". This publication also instructs its readers in the matter of filling out complaint forms. The advice they give, such as the recommendation not to purchase the convection oven because it is not worth the money, is different from the approach used in the United States where the decision is left entirely up to the consumer with no advice given. A second publication titled Consumer Law and Economy is designed for those in marketing, decision-makers in business, lawyers, and teachers. Articles describe the activities of the Consumer Ombudsman and the Market Court, Consumer Law, and economic matters. In 1981 this publication discuessed the decrease in funds available for consumer policy.

The Administrative Division is responsible for the National Board's central administration. It deals with such questions as those relating to staff, finance, premises, and documentation. It also coordinates the National Board's planning and budgeting functions and is responsible for certain other questions of a general nature.

The Public Complaints Board is an independent authority which, at the request of individual consumers, settled disputes between buyers and sellers chiefly concerning defects and shortcomings in goods and services. There is no appeal against rulings by the Board. Three suggestions for improving the effectiveness of the Board are:
1) that the Board be given the opportunity to assess cases concerning real property, 2) that they be allowed to publish traders' names who do not comply with decisions of the Board, and 3) that the Consumer Ombudsman be given the necessary standing to litigate for individuals in civil cases before a public court. Written complaint forms are widely used in Sweden to assist consumers in communicating their affairs. In 1981 the following complaints were registered in the ten sections of the complaint board:

Motor Vehicles	1300
General Department	1067
Textiles	933
Tourism	870
Electronics	633
Footwear	507
Laundry	481
Furs	212
Insurance	195
Boats	112

The rate of compliance after complaints are processed is 85%.

Since 1974 Sweden has had a small claims court in which claims have been enforced. In the United States small claims are not enforceable.

An additional activity of the National Board for Consumer Policies has been the publication of Car Maintenance, a comprehensive, informative report of investigation begun during 1980 to acquire the maximum amount of information about the problems and costs incurred by car owners of Sweden.

NORWAY

Norway has a population of 4 million, and their social democratic form of government finances their consumer activities.

There is broad political agreement that great importance must be attached to solving consumer questions in all avenues of consumer activity, research, education and information, and protection of consumers. The main objectives of consumer policy are to make each household capable of utilizing its resources and to influence industry and the public sector to function to the greatest possible degree in accordance with the needs of the household.

The Ministry of Consumer Affairs and Government Administration consists of six departments. One of these--the Family and Consumer Department--is responsible for the administration of consumer affairs. This Department prepares its budget, formulates consumer policy, cooperates both internationally and with the Scandinavian countries on consumer affairs, legal questions, labeling, and consumer research. In addition, they manage a research grant which can be spent on projects within the department's sphere of interest. The Department's four basic areas of activity are: 1) research, 2) information, 3) protection, and 4) the influence of consumers.

The following consumer organizations function within the framework of the Family and Consumer Department: 1) The Consumer Council, 2) The Committee for Informative Labeling, 3) The State Institute for Consumer Research, and 4) The Consumer Ombudsman and the Commission on Marketing.

The Consumer Council, founded in 1953, is an independent institution aimed at promoting the interests of the consumer through cooperation with public authorities and with institutions and organizations. The Council consists of eight members and a chairman who is appointed by the Government. The Council cooperates with the Consumer Ombudsman, the State Institute for Consumer Research, and the Committee for Informative Labeling. Since 1958 they have been a member of the Nordic Committee for Consumer Matters, and since 1961, a member of the International Organization for Consumers' Union. The Secretariat of the Consumer Council as part of its legal duties prepares the cases that are to be discussed and decided upon in the main Council and deals with consumer complaints and consumer questions. The Secretariat consists of five departments: 1) the Administration Department, 2) the Department of Legal and Economic Affairs, 3) the Consumer Information Department, 4) the Consumer Report, and 5) the Technical Department. The Consumer Information Department provides books, brochures, folders and courses in consumer education. Consumer education is a compulsory subject in the primary school. Seventy-five percent of the expenses of the Consumer Council are covered by the government; the rest are covered through sale of the magazine, Consumer Reports. That publication, with its circulation of 275,000 copies ten times a year, is the largest in the world in relation to population.

In each of the 19 counties in Norway, the County Board appoints a Committee for Consumer Affairs, composed of a chairman and a minimum of four members. The Committee coordinates and initiates work to the benefit of the consumers in the county; this takes place within the framework of the consumer politics outlined by the National Meeting and the Consumer Council. A consumer office in each county receives inquiries from consumers concerning complaints or guidance in buying products or in home economics matters. The offices are approached by individuals, groups, and clubs in connection with different kinds of information work. As a rule, the staff of the offices consists of one consumer consultant, two home economics consultants, and one office clerk. In the United States, only the state of New Jersey has a system like this in which 300 people are serving at the county level as liaison between the lay people and the government. The expenses of the County Consumer Offices are covered by the Consumer Council. The Small Claims Court has been effective in Norway since 1980. More than 77,000 consumer complaints have been received each year in Norway, with motor vehicle complaints at the top of the list.

The Committee for Informative Labeling, begun in 1954, performs as in Denmark. Their practical work is aimed at providing suitable labeling of all the types of consumer goods concerning which consumers need information. They work on the labeling of foodstuffs, textile goods, and domestic appliances. Work is now being done on devising some system whereby labels would have comparative information on them so the consumer could more easily make a choice among several goods.

The State Institute for Consumer Research, begun in 1976, is a reorganization of the Home Economics Office which functioned in the 1940's. Research is conducted on foodstuffs, textiles, detergents, flammable fabrics, food consumption patterns, and consumer behavior. Additional testing is done on tools, machines, and equipment for all household tasks. They combine research and teaching and are in close contact with the State Teacher's Training College of Home Economics at Stabekk. They also cooperate with other Scandinavian countries both directly and through the Nordic Committee.

The Consumer Ombudsman and the Commission of Marketing, established in 1973, has the goal of protecting both business and consumer interests in healthy market conditions. The Consumer Ombudsman has a secretariat with up to 15 employees, some of whom are temporary. He is financed out of the State Budget. The Consumer Ombudsman is responsible for the day-to-day aministration of the rules and for creating a climate of opinion in business favorable to their observation. The Ombudsman forbids activities that are contrary to sound business principles or unreasonable to consumers, requires honest and reliable marketing, and forbids the use of irrelevant inducements, bonuses, or lotteries. He also cooperates with the Consumer Council, the Swedish Ombudsman, and the Nordic Committee. The current Ombudsman in Norway has suggested that the name be changed to Ombuds so that no bias is evident between men and women. He further indicated that advertising with sexual overtones is banned in Norway even though it might be allowed in other European counties. His office has handled 2000 to 2500 cases each year, and they are currently working on packaged tours and prefabricated houses. He also indicated that his job is difficult because, as the sociologist said, "You make a rule or law to satisfy half the people; then you don't enforce it to satisfy the other half."

COMPARISONS BETWEEN SCANDINAVIAN AND U.S. CONSUMER PRACTICES

In comparing Scandinavian consumer practices with those of the United States, the following are evident: 1) both countries have a desire to foster effective consumer education for all ages, 2) both have a consumer product testing service, which publishes its results in a magazine for distribution to its populations, 3) both cooperate with other countries in promoting the interests of the consumer, 4) both seem to be getting a lower quality of consumer products at higher prices, and 5) both have promoted consumer rights such as the right to safety, the right to be informed, the right to choose, and the right to be heard.

The constrasts are: 1) the two consumer approaches differ because one is funded by the government, and the other is not, 2) the consumer framework in Scandinavia consolidates and unifies their activities to a greater extent than is evident in the United States, 3) the attitude toward regulation differs between the countries, 4) consumer laws are enforced in Scandinavia, whereas enforcement is unsuccessful in the United States, 5) the Scandinavian system is able to help the lower class, while the United States system is organized to serve primarily the middle class, 6) the attention paid to labeling is greater in Scandinavia than it is in the United States, 7) written complaint forms are available in Scandinavia, whereas a complaint letter to the company is common in the United States, 8) more legal help is available in Scandinavia through the office of a Consumer Ombudsman, which does not exist in the United States, 9) the Consumer Council in the Scandinavian countries performs many functions which are done in part by scattered organizations in the United States, 10) the consumer county system in Scandinavia is not duplicated in the United States except for the state of New Jersey, and 11) the United States surpasses the Scandinavian countries in its efforts with consumer product safety.

The experience of direct learning about consumer affairs in other countries exposes us to the wide range of possibilities for policy and action by both the government and its people. The Swedish consumer is becoming increasingly militant and willing to exert some individual effort for change --like Americans. Sweden has opted for the middle way. It seems probable that those in charge of extending the welfare state to the Swedish consumer will continue to find ways to preserve a significant amount of freedom of choice for the individual while seeking ways to minimize the hidden dangers which come with such freedoms. That balance between the demands for consumer protection and preservation of the right to free choice plus the efforts to achieve it should be of continued interest and importance not only to the American consumer movement but also to other consumer movements throughout the world.

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FAMILY COMPOSITION AND STOCK ADJUSTMENT PATTERNS: COMPARISONS BETWEEN HUSBAND-WIFE AND FEMALE HEADED HOUSEHOLDS*

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ABSTRACT

This research examines the issue of whether the stock adjustment patterns of female headed households differ from those of traditional, husband-wife households. Results from this study indicate that some important allocation differences exist between the two household types. In particular, (1) female headed households generally have fewer available resources than do their married counterparts, (2) they are slower to adjust to any disequilibriums in their asset holdings, and (3) the female headed households' cross-adjustment patterns do not conform with the patterns generally found in the literature. Investigation of these patterns provides us with added insight as to how general household resource allocations will change as the proportion of female headed households rises in our society.

During the past twenty years, dramatic changes in household composition have occurred in the United States. Some of the greatest compositional shifts have been in the categories of husband-wife and female headed households. Although the shear number of husband-wife families continues to rise in this country, the proportion of households that fall into this traditional family type has been declining. In 1960, 74.8% of all households were made up of the husband-wife type. By 1975, this number had dropped to only 65.4% and projections are that by 1990, the figure will be 54.9%. Their percentage decline has been due in part to the rapid growth of the female headed household. In 1960, 17.2% of all households were headed by women. In 1975, the number had risen to 23.6% and projections are that by 1990, female headed households will account for over 29% of all household types [6, p.57]. These household composition changes have the potential to greatly alter consumption patterns within our society. Indeed, as the proportion of husband-wife households decline and those headed by women alone rise, it becomes more and more imperative that researchers try to analyze and understand the implications of this demographic change for patterns of household resource allocations.

This paper examines household resource allocations to various capital stocks and to consumption by two groups: the traditional, husband-wife household, and the rapidly growing category of female headed households. The paper is divided into three parts. In the first section, a general model of household behavior is outlined. In the second section, the data base is described and descriptive information on the socioeconomic characteristics of the two household types is presented. In the final section, a stock adjustment model is estimated separately for each household type. Discussion of the results focuses on the differences between the adjustment patterns of the two groups and what implications these differences have for changing resource allocation patterns in our society.

A GENERAL MODEL OF HOUSEHOLD STOCK ADJUSTMENT

In what manner if any, are a household's investment allocations related to each other and to consumption expenditures? This question has been investigated quite extensively in the economics literature. One framework that has been frequently adopted when asking this question is the portfolio model of household stock adjustment. The basic premise of this model is that households have a portfolio of investment alternatives over which they must make choices. The portfolio includes such items as housing, automobiles, and financial assets (e.g., stocks, bonds, savings, etc.). Household allocations to these investments are generally thought to depend on the investments' rates of return, the complementarity (or lack of it) between investment alternatives, and the household's permanent income.

Most portfolio work to date has examined the behavior of "average" household types either because they used aggregate data in their empirical work [7,8] or because they homogenized the house-

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holds in their sample to avoid estimation problems [3,10]. Bryant's portfolio work on rural, poor households is the one exception [1]. In the work that follows, we expand the empirical picture some by estimating a stock adjustment model for two different household types. In this formulation we follow the framework used in past micro-data portfolio research [see 1,2, and 10].

Our description of the model begins at the level of the household's desired (or equilibrium) capital demand equations. Let X^P_{jit} be the desired long run stock of item X_j by family i, in year t. In most aggregate models, X^P_{jit} is formulated as a function of the rates of return for all stocks in the portfolio. Unfortunately, in the disaggregate models that are estimated here, it is nearly impossible to calculate rates of return for each household's portfolio of stocks. Following Bryant [1], we circumvent this estimation problem by assuming that once we control on a series of demographic characteristics that may alter a household's returns, rates of return are hypothesized not to vary.

The remaining variable included in each of the desired stock specifications is planned or permanent income. Desired investment is made on a basis of permanent rather than current income, because current income has a random, transitory component in it that a family cannot anticipate, and therefore does not incorporate into its decision-making process.

Despite the fact that households have desired demand functions, at any point in time, a household's current capital stock levels (X_{jit}) will in all likelihood deviate from their desired stock levels (X^P_{jit}) because of adjustment lags. Adjustment lags are inherent in the nature of capital goods acquisition. They occur because of the costs associated with changing a household's capital stock(s). These nonlinear costs may stem from two sources: (1) the monetary costs of adjustment that increase with the magnitude of the disequilibrium, and (2) the money and time costs to the household of gathering relevant information about the market. For example, if a household wanted to add a room on to their house (i.e., increase their existing housing stock), they must search out information about construction costs and room designs (among other things) and these search costs will rise in a nonlinear fashion as the value of the new room they want to build rises.

In a portfolio model, households are seen as being in a continuous process of moving toward their desired stock holdings, which in turn change as the household's permanent income and market rates of return fluxuate. In the world of discrete time that most empirical work deals with, only adjustments within a dictated time frame can be observed. Thus, an examination of the adjustment process reduces to estimating the observed change in a stock between two periods as a function of the household's current transitory income and the magnitude of stock disequilibriums that existed in the initial period.[3]

Given that we do not observe the household's desired holdings of any stock at a point in time, estimation of the adjustment process can be done only after substituting the determinants of the desired stocks directly into the stock adjustment equation. In this context the adjustment system has the following general mathematical form:

$$(X_{kit}-X_{kit-r}) = \gamma_{x_k x_k}\left[x^P_{kit}(D_{it-r}, Y^P_i)-X_{kit-r}\right] + \sum_{j\neq k}^{j} \gamma_{x_k x_j} \left[x^P_{jit}(D_{it-r}, Y^P_{it}) - X_{jit-r}\right] + \gamma_{x_k y_t}(Y^t_{it}) \quad (1)$$

where, D_{it} = the vector of demographic characteristics for household i in period t.[4]

y^P_i = permanent income for household i.[5]

y^t_{it} = household i's transitory income in period t.[5]

and all other variables continue to be defined as they were previously. For our purposes, t=1972, and (t-r)=1969. In addition, each adjustment system that we estimate will have four equations (K=1,2,3,4) like equation (1), one for each of the portfolio elements that are outlined below.

THE DATA

The ideal data set for this study would be a panel of husband-wife and female headed households that responded to questions directed at obtaining information on all physical and financial investments that the household made over its life cycle. Unfortunately, micro-data on household investments are difficult to obtain because of expense, disagreement about what constitutes investment, and once it is defined, how it should be empirically measured. The data which require the fewest definitional compromises and which will be used for this study were taken from the Panel Study of Income Dynamics (PSID).

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[3] See Zick [10] for a more detailed explanation of the adjustment process.

[4] In our estimated model, these demographic characteristics include region of residence and urban/rural dummies, a race dummy, a dummy for ever having children, age of the youngest child if the household has children, years of marriage (for the married sample only), and a previous marriage dummy (for the female headed household sample only). Table 1 gives the descriptive statistics for all of these variables.

[5] Permanent income is defined using the conventional approach first suggested by Friedman [2]. Essentially this involves taking a weighted average of the household's past income. The weight given to each year's income is a function of the household's time horizon and discount rate. Past work [2] suggests that the choice of a three-year horizon and a discount rate of .35 is reasonable. Correspondingly transitory income is defined as the difference between the household's current income in 1969 and its permanent income as it has just been defined.

Three household stocks along with a measure of household consumption expenditures are identified in the PSID. Physical capital is represented by two of the household's largest durable goods: housing and automobiles. It is assumed for the purposes of this work that both housing and automobile stocks are directly proportional to their reported net dollar value in each year. Financial capital is approximated by the dollar value of the household's stocks, bonds, trusts, savings, and property.[6] Finally, to round out the model, some measure of consumption expenditures had to be derived.[7] In this data set, consumption is measured by a set of annual household expenditures that include rent, property taxes, food expenditures, and income taxes. While these items do not exhaust a household's consumption possibilities, they are the only measures available in the PSID, and thus, it is assumed that their sum is directly proportional to total household consumption.[8] Therefore, within the constraints of the data, a portfolio of four resource allocation categories are identified: housing, cars, financial assets and consumption.

Two subsamples are drawn from the PSID for the purposes of estimating this four equation stock adjustment model. The first sample includes only households where the respondent is married and the spouse is present throughout the period of analysis. The second sample includes only households where there is a nonmarried female head who remains single throughout the period of analysis. The traditional husband-wife sample contains 990 households and the nontraditional female headed sample contains 194 households. In the analyses that follow, all responses in both samples are weighted to make them representative of a random cross-section of husband-wife and female headed households in this country.[9]

Table 1 presents descriptive statistics for both subsamples. By examining these figures some interesting information emerges. First, it appears that on average, a female headed household has only half the annual permanent income of a husband-wife household. Thus, simply because of monetary resource constraints, it would seem that female headed households should have different (slower?) adjustment patterns than do two-adult households. Second, it seems that female headed households' asset holdings in 1969 are on average, substantially lower than those of husband-wife households in all categories. To further investigate how changes in the households' resource holdings complement or compete with one another in each of the two samples, we turn to the estimates of the stock adjustment systems.

Table 1. Descriptive Statistics for the Two PSID Subsamples

Variable[1]	Husband-Wife Sample		Female Headed Sample	
	Mean	Standard Deviation	Mean	Standard Deviation
House Value[2]	9191	9766	5207	8564
Car Value[2]	1123	945	632	1008
Consumption Expenditures	3964	2588	2540	1477
Financial Assets	11360	27923	6573	26890
Permanent Income	12470	7019	6760	3746
Transitory Income	481	1865	313	1309
Head's Race (1=black,0 otherwise)	.072	.259	.165	.372
Urban/Rural (1=urban, 0 otherwise)	.690	.463	.784	.413
North East (1=NE,0 otherwise)	.254	.435	.286	.453
Northcentral (1=NC,0 otherwise)	.332	.471	.321	.468
South (1=South,0 otherwise)	.261	.433	.240	.428
West (omitted cate.) (1=West,0 otherwise)	.153	.441	.153	.408
Previously Married (1=yes,0=no)	-----	-----	.641	.481
Years Married	18.26	9.39	-----	-----
Have Children (1=yes,0=no)	.925	.263	.620	.460

[1] All information here came from the 1969 wave, however all dollar figures have been measured in deflated dollars (where 1967=100)

[2] This includes the zero values for those households that did not own a home or a car.

EMPIRICAL RESULTS OF THE STOCK ADJUSTMENT MODELS

For each sample, the four equation stock adjustment system should be estimated simultaneously to allow for mutual correlation of the error terms across equations. However, given that this seemingly unrelated system is just identified, and that each equation has the exact same vector of independent variables, ordinary least squares (OLS) estimates of the regression coefficients are unbaised, consistent, and efficient [5]. Therefore, each of the equations in the system are estimated separately using OLS. The own- and cross-adjustment parameter estimates obtained from each sample are presented in Tables 2 and 3.[10]

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[6] The PSID does not contain information on the dollar value of the financial stocks held by a family in each period. However, it does contain information on the dollar flows generated by the stocks of financial capital over each year. For this work, these dollar flows were aggregated and multiplied by the reciprocal of the average rates of return for 1969 and 1972 to obtain an estimate of a household's financial wealth in each year.

[7] Wachtel [8] and others [9] have argued quite effectively that the allocation of income and wealth are made simultaneously and therefore a portfolio model should include both assets and consumption.

[8] Other types of consumption measures were tested however the proportional measure used here performed best. See Zick [10] for details.

[9] The PSID data oversamples poor households and the weighting primarily corrects for this.

Interpretation of the estimated own- and cross-adjustment coefficients can be best illustrated by example. For instance, in Table 2, row 1, column 2, the reported adjustment coefficient is .0606. This figure states that in 1969, if a female headed household had an excess demand[11] for housing of $1000, then between 1969 and 1972, her financial asset holdings increased in value by $60.00, ceteris paribus. The positive sign for this adjustment coefficient thus indicates that an excess demand for housing complements a female headed household's investment in financial assets. If we examine the coefficient in row 1, column 3, of Table 2, we observe the reverse situation. Here an excess demand for housing competes for resources with the household's automobile stock. Indeed, the adjustment coefficient indicates that given the same excess housing demand, by 1972 the household's automobile stock will have dropped (depreciated) on average by $13.00, ceteris paribus.

Table 2. Weighted Parameter Estimates of the Own- and Cross-Adjustment Coefficients for the Sample of Female Headed Households (t statistics in parentheses)

Independent Variables[1]	Dependent Variables[1] (the change in...)			
	House Value	Finaicial Assets	Car Value	Consumption Expenditures
House Value	.0410 (1.20)	.0606 (.306)	-.0130 (-2.32)**	.0183 (2.97)**
Financial Assets	-.0300 (-1.79)*	.365 (10.1)**	.00171 (.620)	.0138 (4.64)**
Car Value	-.359 (-.809)	1.03 (1.06)	.823 (11.1)**	.0970 (1.22)
Consumption Expenditures	.570 (1.82)*	-.644 (-.940)	.0160 (.307)	.218 (3.98)**
$\bar{R}^2$	.353	.750	.627	.601
F	9.10	46.4	25.9	23.4

[1] All variables are measured in deflated dollars (where 1967=100).

**Significant at the .05 level.

*Significant at the .10 level.

Given this interpretive guide, we can now make some comparisons between the adjustment coefficients presented in Tables 2 and 3. First, it appears that married households adjust to disequilibriums more quickly than do their nonmarried counterparts. In almost every instance, the own adjustment coefficient (those along the main diagonal of each table) is higher for the husband-wife households. For example, if a husband-wife household had an excess demand for financial assets of $1000 in 1969, on average, by 1972 they would have increased their holdings of financial assets by $500, ceteris paribus. However, an average female headed household with the same excess demand would only close the gap by $365. Thus, it appears that female headed households are slower to remedy differences between their desired and actual holdings than are traditional husband-wife households.

Table 3. Weighted Parameter Estimates of the Own- and Cross-Adjustment Coefficients for the Sample of Husband-Wife Households (t statistics in parentheses)

Independent Variables	Dependent Variables[1] (the change in...)			
	House Value	Financial Assets	Car Value	Consumption Expenditures
House Value	.229 (9.51)**	-.272 (-2.93)**	-.0186 (-4.31)**	-.0184 (-2.31)**
Financial Assets	-.0108 (-1.44)	.500 (17.3)**	-.00557 (-4.14)**	-.00373 (-1.50)
Car Value	-.0569 (-.249)	-3.47 (-3.93)**	.491 (12.0)**	-.126 (-1.66)*
Consumption Expenditures	.900 (5.12)**	.339 (.500)	-.000592 (-.0191)	.530 (9.08)**
$\bar{R}^2$	.152	.270	.151	.143
F	13.6	27.1	13.5	12.8

[1] All variables are measured in deflated dollars (where 1967=100)

**Significant at the .05 level.

*Significant at the .10 level.

The only exception to this adjustment pattern occurs with respect to automobile stocks. The estimates show that female headed households adjust their car stocks almost twice as quickly as do the traditional households. This unanticipated result may be due to differences in the absolute holdings of automobile stock and work patterns of the two groups. From Table 1, we can see that on average, female heads have half the initial car stock that their married counterparts have (i.e., they have one car rather than two). In addition, all of the female heads (but not all of their counterpart wives) in this sample work outside the home and thus, their automobile is probably an indispensible part of their fixed costs of employment. Therefore, if a female head's car should malfunction (causing the household to experience a positive excess demand for automobile stock), resources must soon be diverted to repair or replacement of the automobile so that her employment is not jeopardized. Conversely, husband-wife households with their higher initial stock levels (e.g., two cars rather than one) can afford the luxury of adjusting any deficits in their automobile stock at a slower pace.

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[10] See Zick [10] for a detailed explanation of how the adjustment coefficients are derived from the regression estimates.

[11] For the purposes of this research, excess demand is defined to exist whenever the household's actual holdings of the stock in question are less than their desired holdings.

Turning to comparisons of the cross-adjustment coefficients, several interesting contrasts emerge. In particular, in the case of financial assets and consumption expenditures, household adjustment behavior completely flip-flops between the two subsamples. For married households, an excess demand for all three investment alternatives competes with resources that would otherwise be devoted to maintaining a specified level of consumption expenditures. In addition, housing and automobile investments compete for resources with financial assets. The behavior exhibited by the married households conforms with what economists usually posit. That is, to some extent, husband-wife households appear to finance investment by decreasing their current consumption. And furthermore, they finance physical investments at the expense of some financial investments and vice versa. However, this scenario appears not to hold for the female headed households.

One plausible explanation for this phenomenon is that female headed households tend to finance both additional investments and consumption out of debt to a greater extent than do husband-wife households. Perhaps because female headed households initially have such low levels of assets and consumption they cannot afford to reduce any of them further in order to increase their holdings of another portfolio component. Unfortunately, the PSID data does not have debt information and so debt was omitted from this model. Further examination of this hypothesis therefore must wait until more complete longitudinal household investment data can be found.

SUMMARY AND CONCLUSIONS

It is clear that the composition of American households has been and will continue to change. In particular, the proportion of female headed households is on the rise. Investigation of their resource allocation patterns provides us with added insight as to how investment and consumption will change in our society as a whole, as our demographic composition changes. In this paper, we have investigated the issue of whether the stock adjustment patterns of female headed households differ from those of traditional, husband-wife households.

Results from this study indicate that some important allocation differences exist between the two household types. First, female headed households in general, have fewer available resources (both financial and physical) that do their married counterparts. Thus, if the proportion of female headed households continues to rise, under the current conditions the average family's economic resources will decline in the United States. Second, they are slower to adjust to any disequilibrium in their asset holdings than is the traditional household type. This implies that as the number of female headed households increases, we can expect to observe slower adjustments to changing market conditions (e.g., changes in rates of return to investment) by the general population of households. As a result, it is possible that the general rate of household capital acquisition may decline. This could have serious implications in particular for the already troubled housing market. Finally, with respect to cross-adjustment patterns, husband-wife households adjust in the same direction as economic theory would lead one to posit while female headed households do not. One possible explanation for this is that these two household types make differential use of debt to adjust their portfolio composition. If this is the case, this fact coupled with the changing demographics could put new resource demands on lending institutions in the future.

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HUSBANDS AND WIVES REPORT ON ECONOMIC HELPING BEHAVIOR: A STUDY OF RESPONSE AGREEMENT[1]

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ABSTRACT

Data from fifty-nine couples surveyed regarding the frequency and perceived value of economic help given and received by their families were used to determine the degree of consensus in husband and wife response. Analysis revealed a high level of consensus for the majority of couples. A significant difference in means of husbands' and wives' responses was found for only one variable.

It has been fifteen years since Morgan [12] published results of his study of family economic behavior based on a survey in which both husbands and wives were respondents. His analysis of couple consensus illustrated the erroneous conclusions about family economic behavior that were possible when relying on behavioral reports of only one spouse.

In the years since, the problem of the reliability of survey data reporting economic behavior of families has continued to engage researchers. Although the family may be conceptualized as an integrated discrete economic unit using commonly determined purposes, the empirical measurement of the economic behavior of families is complicated by the methodological issue of discrepant responses of husbands and wives to questions about financial behavior. Studies of husband-wife response consensus about family affairs suggest that consensus varies widely, leading one to the conclusion that the validity of family research may vary widely also.

Furthermore, as the cost of surveys has risen, the added concern for producing maximum reliability and validity while keeping cost within reason has emerged. Identifying those aspects of economic behavior of families where respondent choice may have greatest impact would provide useful information for those planning family research.

The research reported here concerns the consensus of husband and wife responses to survey questions regarding one aspect of family economic activity, the flow of transfers, specifically the giving and receiving of economic help.

LITERATURE REVIEW

Several studies have discussed the degree of consensus of husband and wife responses and have found that responses are very similar when considered on an aggregate basis, with the average scores of husbands and wives being of primary interest. However, when individual families are the focus, the discrepencies within families may be great in many cases [5, 6, 7, 14, 17].

The degree of husband-wife consensus is an indicator of the degree of accuracy of a measure of family response if only one spouse is surveyed. Granbois and Willet [7] found that 68% of husband-wife responses were congruent; Scanzoni [16] reported that in about 50% of the cases, the wife's response was in exact agreement with that of her husband and that in 75% of the cases the responses were in approximate agreement.

A recent study of satisfaction across several life domains, e.g., family, family income, savings, standard of living, among 1200 families based on husband and wife reports found a high degree of consensus among family members [10].

Factors related to spousal response consensus have been examined as well. No consistent pattern of discrepancy linked to sex of respondent has been noted [7, 11]. Other studies suggest that differing perspectives on life contribute to the level of response discrepancy [3, 12, 13, 15]. Lack of communication was cited as a factor in lack of consensus [6, 12, 13]. Demographic characteristics were found by some investigators to be linked to discrepant response. Husband's education level and occupational status [2] and age [8] were to shown to be linked to consensus. Spouses with similar educational backgrounds tended to have greater consensus [8], although in another study no evidence of relationship between demographic homogeneity and spousal consensus was found [9].

Other studies have explored consensus as related to the nature of the information being sought. Balweg [1] noted that information about the family that is numerically quantifiable may produce more congruent responses from husbands and wives than information that is not. Family relationships, decision-making, power structure, family planning and household tasks are family matters about which spousal response agreement is less likely [4, 15, 17].

In reporting family income, husbands were found to report higher income than wives [8, 12].

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METHODS

Data for this analysis was collected as part of a regional investigation of quality of everyday life.[1] A sample of 200 families was drawn using a systematic sampling plan with clustering in the final stage. One hundred families lived in a SMSA of 2 million in the upper midwest, the remaining families lived in a community of less than 10,000 population. Criteria for inclusion in the sample were an intact fmaily with at least one child under 18 years of age. Both spouses were interviewed using structured questionnaires; one spouse was interviewed in person by a trained interviewer, a second questionnaire was left with the other spouse with directions for completing and return mailing. Sex of respondent to the in-person interview was controlled to achieve equal representation among in-person and self-administered schedules.

The interview schedule was designed to measure the frequency and perceived value on in-kind economic transfers (help received from persons outside the family without pay; help provided to persons outside the family without pay). The kinds of transfers for which frequency and value measures were made include child care, home maintenance, car care and repair, housework, transportation and gifts of home produced consumer goods. Frequency of transfer was measured on a five-point scale ranging from never to several times a week. Scale positions for frequency were assigned numerical values, 0 for never to 4 for several times a week. Perceived value of transfers was measured by a 5-point scale with no value, little value (less than $25), some value ($25-$100), and much value ($100-$500) as the intervals. Intervals of the value scale were assigned numerical values from 0 to 4. The scale values were used to construct scores for each respondent, husband and wife, for each item measured. Discrepancy scores were constructed for each couple and each variable by subtracting the wive's score for each variable from the husband's score for that variable, retaining the sign. For example, the wife's score of "3" was subtracted from the husband's score of "5" producing a discrepancy score of +2, indicating that for this particular variable and couple the spouses' scores were discrepant by two intervals with the husband reporting a higher level of transfer.

FINDINGS

The frequency distribution of the signed discrepancy scores is shown in Tables 1 and 2. With respect to the reports of economic transfer behavior, more than three-fourths of the discrepancy scores are within ±1 interval or

TABLE 1

DISTRIBUTION OF HUSBAND-WIFE DISCREPANCY SCORES FOR FREQUENCY OF TRANSFERS

TYPE OF HELP		DISCREPANCY SCORE											$\bar{X}$
	N	0	+1*	+2	+3	+4	+5	-1	-2	-3	-4	-5	
		f	f	f	f	f	f	f	f	f	f	f	
Babysitting													
Help Given	58	17	11	4	1	1	-	12	11	-	1	-	-.207
Help Received	56	14	12	5	3	2	-	12	4	3	1	-	.107
Home Maintenance													
Help Given	58	17	13	5	-	-	-	20	3	-	-	-	-.052
Help Received	57	20	17	4	-	-	-	12	4	-	-	-	.083
Vehicle Maintenance													
Help Given	58	25	10	7	1	-	-	8	3	3	1	-	0
Help Received	57	32	10	7	-	-	-	6	2	-	-	-	.246
Housework													
Help Given	54	19	9	4	2	-	1	11	5	2	1	-	-.056
Help Received	56	25	9	3	-	3	-	13	2	1	-	-	.125
Food Sharing													
Help Given	55	17	8	5	1	-	-	16	8	-	-	-	-.200
Help Received	57	21	7	8	2	-	-	14	5	-	-	-	.088
Transportation													
Help Given	56	18	8	3	3	1	-	14	6	3	-	-	-.143
Help Received	57	18	5	8	2	3	-	12	6	2	1	-	.088

*+ = Husband's score higher than wife's score; - = Wife's score higher than husband's score

TABLE 2

DISTRIBUTION OF HUSBAND-WIFE DISCREPANCY SCORES FOR VALUE OF TRANSFERS

VARIABLE	N	0	+1*	+2	+3	+4	+5	-1	-2	-3	-4	-5	$\overline{X}$
Babysitting													
Help Given	56	17	13	3	-	1	-	16	3	2	1	-	-.161
Help Received	54	26	16	-	1	-	-	6	4	1	-	-	.037
Home Maintenance													
Help Given	55	16	18	5	1	-	-	8	6	1	-	-	.145
Help Received	54	21	9	6	2	-	-	13	1	2	-	-	.111
Vehicle Maintenance													
Help Given	55	18	17	5	1	-	-	9	5	-	-	-	.200
Help Received	54	26	9	4	1	-	-	10	3	1	-	-	.019
Housework													
Help Given	52	21	13	4	-	-	-	7	3	4	-	-	-.077
Help Received	54	25	10	2	2	1	-	8	3	1	2	-	-.019
Food Sharing													
Help Given	55	20	13	5	1	-	-	11	4	-	-	1	.036
Help Received	53	26	10	3	-	-	-	8	5	1	-	-	-.094
Transportation													
Help Given	48	17	12	3	-	-	-	12	3	1	-	-	-.063
Help Received	53	24	10	5	-	-	-	7	4	3	-	-	-.075

*+ = Husband's score higher than wife's; - = Wife's score higher than husband's

less. For specific variables, the range is from 61% to 89%. The mean discrepancy score for each kind of help was determined by adding all discrepancy scores, retaining the sign, and dividing by the number of cases for which both husband and wife responded. These means are shown in Tables 1 and 2. Mean discrepancy scores ranged from ± .019 to .246.

The mean of husbands' responses and the mean of wives' responses were computed for each variable. A test of significance of differences (t-test) indicated that the mean of husbands responses differed from the mean of wives' responses in only one instance - the reporting of help received with car care and repair (see Tables 3 and 4). Husbands reported higher levels of help received with the care and repair of car than did wives.

The summed means of all husbands' and all wives' responses for the four groups of variables - frequency of help given, frequency of help received, perceived value of help given, perceived value of help received - are shown in Table 5. No significant difference between any of these means was found.

CONCLUSIONS

The consensus of husband-wife reports on frequency and value of inter-family economic transfers, specifically in-kind help, leads to the conclusion that the relatively small increase in the reliability of the measure of family transfer behavior that collecting data from both spouses provides is not equal to the substantial increase in cost that collecting responses from both spouses entails.

The greatest discrepancy in husband-wife responses occurs around reports on helping that is sex-role related, i.e., baby-sitting and care and repair of cars. Researchers using family-level measures of economic behavior that are sex-role sensitive variables may need to pay careful attention to issues of relatability in such cases.

TABLE 3

MEAN SCORES OF HUSBANDS' AND WIVES' FOR FREQUENCY OF TRANSFERS

TYPE OF HELP	N	MEAN OF HUSBANDS' RESPONSES	MEAN OF WIVES' RESPONSES	p. VALUE
Babysitting				
Help Given	58	2.2069	2.4138	.285
Help Received	57	1.8947	1.6842	.399
Home Maintenance				
Help Given	58	1.7241	1.7759	.713
Help Received	58	1.3793	1.1724	.256
Vehicle Maintenance				
Help Given	58	1.2931	1.2931	1.000
Help Received	58	1.1552	.7931	.035
Housework				
Help Given	54	1.5556	1.6111	.798
Help Received	57	1.0702	.8246	.253
Food Sharing				
Help Given	55	1.9091	2.1091	.236
Help Received	58	1.8448	1.6724	.358
Transportation				
Help Given	56	2.3393	2.4821	.484
Help Received	58	1.7759	1.5690	.425

TABLE 4

MEAN OF HUSBANDS' AND WIVES' SCORES FOR VALUE OF HELP GIVEN AND HELP RECEIVED

TYPE OF HELP	N	MEAN OF HUSBANDS' RESPONSES	MEAN OF WIVES' RESPONSES	p. VALUE
Babysitting				
Help Given	56	1.6250	1.7857	.380
Help Received	54	1.3148	1.2778	.792
Home Maintenance				
Help Given	55	1.8182	1.6727	.399
Help Received	54	1.4444	1.3333	.523
Vehicle Maintenance				
Help Given	55	1.2545	1.0545	.207
Help Received	54	1.0926	1.0741	.903
Housework				
Help Given	52	1.1538	1.2308	.667
Help Received	54	.8519	.8704	.926
Food Sharing				
Help Given	55	1.5636	1.5273	.839
Help Received	53	1.4151	1.5094	.520
Transportation				
Help Given	48	1.6250	1.6875	.695
Help Received	53	1.1887	1.2642	.659

TABLE 5

SUMMED MEANS OF ALL HUSBANDS' AND ALL WIVES' RESPONSES

VARIABLES	N	SUMMED MEANS OF HUSBANDS' RESPONSES	SUMMED MEANS OF WIVES' RESPONSES	P. VALUE
Frequency of Help Given	59	11.9153	12.5424	.566
Frequency of Help Received	59	10.1356	7.7288	.060
Value of Help Given	59	11.1017	11.4237	.838
Value of Help Received	59	9.6271	9.3220	.871

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FAMILY SPENDING NORMS

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ABSTRACT

This paper describes a computer program developed to answer the question "How do families similar to mine spend their money?" Multiple regressions were run for 24 spending categories using data from the BLS Survey of Consumer Expenditures. The computer program incorporates the regression results.

Families often ask "How much should we be spending on various spending categories?" Usually they want, or are satisfied with "How much are other families spending" [3]? The frequency with which this type of question is asked suggests budgeting and financial planning are difficult for families. If families were well informed and rational, perhaps they would not be so concerned with the spending patterns of other families. Nevertheless, spending is not the only aspect of life for which people ask "Am I normal?"

Typical or normal spending patterns also provide important information for various aspects of public policy and legal cases. The amount a family needs to live on is presumably related to community norms [9] and typical patterns of spending. Income tax exemptions and welfare payments have been somewhat based on spending patterns of particular samples of families. There has been an extensive amount of research done on expenditure patterns [8], much of which has been directed toward estimation of elasticities, and some of which has been directed toward estimation of equivalence scales. Both of these topics are relevant to this paper, but space limitations prevent a review of the literature.

The most commonly used and abused spending guidelines have been the U.S. Bureau of Labor Statistics Urban Family Budgets. Textbook authors [5;6] and others [2] have discussed these budgets as if they were for the typical or average American family of four persons. The BLS budgets for four-person families and for retired couples are based on spending patterns from the 1960-61 Survey of Consumer Expenditures. The budgets have been useful for comparisons over time and between locations, but they were not designed to show how average families should or did spend their money [13]. The Bureau of Labor Statistics is eliminating its program for revising them, due to its own budget cuts [13].

The Survey of Consumer Expenditures could be used to show average spending patterns, but the overall pattern of spending is not very meaningful because of the variety of household types and income levels represented. One could use the published tables of mean spending levels by various categories, such as income, family size, age of head, and location [1;11], but this procedure is limited because of the lack of tables simultaneously controlling for two categories. There are a huge number of possible combinations of relevant characteristics (e.g. black husband-wife families with two teenage children owning their own home, living in a Standard Metropolitan Statistical Area of a million or more population.) It would not be practical to publish a table of mean expenditures cross-categorized by many categories. The last Survey of Consumer Expenditures for which there are published results available was conducted in 1972-73. A continuing survey of consumer expenditures is being conducted, but no results have been published [4].

A customized breakdown is needed to help families budget, to provide norms[1]--average spending patterns for similar families. The rest of this paper will discuss a method of calculating average spending patterns for any particular type of American household. The method involves regressing spending in each category on family characteristics. The regression coefficients are used in a computer program that can be used by any family to obtain spending patterns of similar families. Before discussion of the regressions, simple univariate statistics from a subsample are discussed to illustrate some methodological issues.

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[1] Note that the term "norm" in this paper does not have the same meaning as is often used in sociological theory. As Morris and Winter state, "Cultural norms include the full range of rules that society promulgates in more or less formal ways to govern the way people live and behave" [7]. It may be a mistake to infer norms directly from behavior. There are family housing expenditure norms in terms of minimum amounts that can be spent on housing (enforced by building and housing codes, zoning regulations, and social pressure from neighbors) and maximum amounts (enforced by lenders.) Because of the prevalence of the fixed rate mortgage, for homeowners family spending on housing typically has been a high proportion of the budget when the first home is purchased, then a declining portion of the family budget until retirement, when income and other spending fall.

METHODOLOGICAL QUESTIONS

Data

The BLS 1972-73 Survey of Consumer Expenditures is the only large recent set of data available to researchers. The 1973 survey included 10,106 consuming units. When the data from the continuing survey of consumer expenditures is made available to researchers by the BLS, similar procedures can be applied.

Specificity of Categories

How narrow should the spending categories be? The BLS Urban Family Budget categories are fairly broad. Greater detail may in some cases be more meaningful, e.g. having hair care at barber shops and beauty parlors separated out from personal care. In other cases, extra detail may not be as meaningful, e.g. relatively few people pay for home improvements in any year, so the mean expenditure levels reflect many families with zero expenditures and some families with very large expenditures. To give more insight into this issue, Table 1 shows spending as a percent of total consumption for 24 categories for a subsample of 61 families. In 17 categories, some households reported zero expenditures. The reporting of zero expenditures was due to actual family practices and situations (e.g., homeowners with paid-off mortgages do not have any mortgage payments) and perhaps also due to limitations of the data gathering methods [11].

Mean or Median?

The median spending for a category may seem to be more typical than the mean amount, but the mean is easier to work with. As shown in Table 1, the spending categories for which all households spend at least some money have means close to the medians. For instance, mean spending on food away from home is 20.8% of total consumption, compared to the median of 20.1%. In contrast, the median amount for home improvements as a percent of total consumption was only 0.1 percent, but the mean was 3.1 percent. There are obvious explanations for the cases with substantial discrepancies between the mean and median. For instance, about half of the families spend nothing on home improvements, while a few families spend very large amounts. Means will be used in this paper because of the advantages of the regression technique and the unavailability of median expenditure figures for updating.

Distribution Around the Central Tendency

It may be useful to know whether one is spending more or less than the median amount for a category, but it would be even more useful to know how deviant one is. If we use the 50 percent range (mean or median plus or minus 25 percent of the distribution) as the nondeviant range, Table 1 shows how well the 50 percent range around the mean (based on the assumption of a normal distribution) compares with the actual distribution around the median in this subsample (shown by the range from the 25th percentile to the 75th percentile.) For categories for which most households spent some money, the 50 percent range around the mean is fairly close to the actual 50 percent range around the subsample median. Some of the deviant cases (especially fifth and 95th percentiles) may be due to infrequent large purchases (e.g., furniture and equipment) or different habits (e.g., tobacco and alcohol, for which there is also the factor of under-reporting.) The 50 percent range around the mean may be useful in budget analysis for some of the larger categories, such as food at home. The 50 percent range would not be very useful for alcohol or home improvements.

Updating

Consumers change their spending patterns in response to changes in family composition, tastes, real incomes and relative prices. One method for updating is to use per capita consumption in current dollars from the National Income and Product Accounts (NIPA) [10]. The percentage increase in current per capita spending in each category from the survey year (1973) to the latest year for which the NIPA figures are available can provide a reasonable method of updating. Even though the per capita changes may not be appropriate for all subgroups in the population, on the average the percentage changes should reflect all of the causes of changes listed above.

Reference Groups

If a consumer asks "How do families like mine spend their money?", the researcher is confronted with the question, "What is the appropriate reference group? All families of the same size? Similar income? Similar age of head? Similar family life cycle stage?" The specificity of the reference group is limited by the size of the sample used. The Table 1 sample has 61 families, even though it was from a sample of 10,106 consuming units in the 1973 Survey of Consumer Expenditures. The size of the sample could have been doubled by also using 1972 data, but note that in Table 1 there were no controls for education or occupation of the head, ages of the children or other household members, or other factors that might influence spending patterns. Multiple regression can give more flexibility by allowing a choice of the factors which are most significant for each spending category.

THE REGRESSIONS

Multiple regressions were run for each spending category, using all households with fewer than 10 members.[2] The spending in each category was regressed on total current household consumption,

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[2] To avoid unusual or ambiguous cases for defining family life cycle. Details of the regressions and other aspects of this paper will be available in a monograph from the author.

Table 1. Expenditures as Percent of Consumption for 4 person husband-wife families with pretax incomes from $12,000 to 14,999, in SMSA, white, head over 34, not retired

Expenditures as Percent of Total Consumption[1]

Category	% with zero expenditures	Mean	50% range[2]	5th percentile	25th percentile	median	75th percentile	95th percentile
Food at Home	0%	20.8%	16.5% to 25.0%	12.3%	15.9%	20.1%	24.0%	34.1%
Food Away From Home	3	4.0	2.0 to 6.0	0.6	1.7	3.7	5.2	10.2
Clothing, Shoes, Jwlry	0	6.3	4.2 to 8.4	2.4	4.3	6.1	7.4	12.5
Alcohol	25	1.0	-0.2 to 2.2	0.0	0.0	0.3	1.1	4.0
Home Energy	0	4.9	3.7 to 6.2	2.1	3.2	4.8	6.1	8.2
Tobacco	33	1.8	0.5 to 3.2	0.0	0.0	1.5	2.7	4.8
Gasoline	8	4.7	3.1 to 6.4	0.0	2.9	4.7	5.9	9.2
Other Transportation	2	13.5	6.5 to 20.6	3.3	5.3	8.4	21.4	33.7
Hair Care	3	1.3	0.6 to 1.9	0.1	0.5	1.0	2.0	2.9
Vacations	23	3.5	0.9 to 6.0	0.0	0.1	2.2	5.0	11.5
Home Recreation	0	4.2	2.3 to 6.0	0.6	1.9	4.0	6.0	9.0
Reading Materials	5	0.8	0.0 to 1.6	0.0	0.2	0.5	0.8	1.7
Misc., Education	18	1.4	-0.3 to 3.0	0.0	0.0	0.4	1.2	7.4
Gifts, Contributions	0	3.6	0.6 to 6.6	0.2	0.8	2.2	4.1	12.5
Medical Expenses	2	3.4	0.3 to 6.4	0.2	1.0	2.6	3.8	7.2
Health Insurance	30	2.1	0.6 to 3.5	0.0	0.0	1.2	3.5	6.1
Household Operations	0	3.0	1.6 to 4.5	0.8	1.5	2.4	3.5	7.2
Furniture, Equipment	3	5.3	2.1 to 8.5	0.1	1.5	4.2	7.2	13.0
Life Insurance	21	2.7	1.0 to 4.5	0.0	0.1	2.5	3.8	6.5
Rent or Mortgage[3]	15	8.5	3.9 to 13.1	0.0	3.6	7.4	12.0	21.5
Property Tax on Home	10	4.2	1.8 to 6.5	0.0	1.5	3.8	5.7	9.3
Home Maintenance	25	2.5	-0.9 to 5.9	0.0	0.0	0.6	2.7	8.4
Home Improvements	49	3.1	-5.2 to 11.4	0.0	0.0	0.1	1.4	8.6
Home Insurance	21	0.8	0.3 to 1.3	0.0	0.3	0.7	1.1	1.7
TOTAL CURRENT CONSUMPTION AS PERCENT OF PRETAX INCOME		73.8	55.8 to 91.8	41.8	55.9	69.3	80.2	114.8

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[1] Current consumption: not including home improvements, gifts and contributions, or life insurance

[2] 50% range is mean - .675 (standard deviation) to mean + .675 (standard deviation), if variable has a normal distribution.

[3] Mortgage payment does not include payments to principal. Table 2 shows housing and ownership charcteristics of subsample.

Table 2. Comparison of Subsample Percentages to Comparable Regression Results

Spending as Percentage of Total Current Consumption Expenditures

Subsample Mean	1973 Regression Predictions	Estimated For 1981	Category
20.8%	20.1%	19.0%	Food at Home
4.0	5.3	5.7	Food Away From Home
6.3	7.3	6.1	Clothing, Shoes, Jewelry, Watches
1.0	0.8	0.8	Alcoholic Beverages
4.9	5.2	7.0	Home Energy: Elec.,Heat, Cooking
1.8	2.1	1.6	Tobacco Products
4.7	5.7	8.6	Gasoline, Oil for vehicles
13.5	14.1	12.4	Other Transportation, car pmt., insurance, repairs
1.3	1.4	1.3	Hair Care: Barber Shops and Beauty Parlors, etc.
3.5	2.8	2.6	Vacations
4.2	3.7	3.4	Home Recreation
0.8	0.5	0.4	Reading: newspapers, books, magazines
1.4	1.6	1.6	Misc. Consumption, education
3.6	5.4	5.4	Gifts, Contributions, Alimony.
3.4	3.8	4.9	Medical, Dental Expenses
2.1	1.0	0.9	Health Insurance
3.0	2.9	2.4	Household Operations: phone, etc.
5.3	4.7	3.9	Furnishings, Equipment
2.7	3.5	3.9	Life Insurance
8.5	15.8	16.6	Rent or Mortgage
4.2	3.2	3.4	Property Tax on Home
2.5	1.9	2.0	Home Maintenance
3.1	3.5	3.7	Home Improvements
0.8	1.0	1.0	Home Insurance

*Regression results based on 4 person husband-wife family, head aged 45, high school graduate, factory worker, wife not employed, boy aged 6-11, girl aged 12-18, North Central region, suburb of SMSA with 400,000-999,999 population, single family house, gas heat, paying mortgage, dwelling is 25 years old, 1973 income = 13,491.

and the square and cube of total current consumption, on the region and type of area (size of SMSA, central city versus outside central city of SMSA, or rural or non-SMSA urban area), race, education, and occupation of head, whether the household was headed by a married couple or not, whether the wife was employed, and the difference in education between the husband and wife. Two regressions were run for each spending category, each with the variables listed above, plus either family composition variables and age of head, or family life cycle variables and household size. All independent variables except age of head, difference in education between the husband and wife, and the total consumption variables were coded as dummy variables. The regressions were rerun with the variables which were significant at the one percent level. For each spending category, the model with the highest adjusted R squared was chosen.

THE FAMILY SPENDING PROGRAM

The regression coefficents from each of the models chosen were incorporated into a computer program which can ask a consumer about household characteristics, then print predicted spending amounts for each category. The program has been used by about 50 consumers of various ages and educational levels, with no substantial problems reported. The computer program asks for gross annual income in 1981, estimates equivalent 1973 income based on changes in per capita income between 1973 and 1981, then estimates total consumption expenditures for 1973. Total estimated 1973 consumption expenditures, along with current characteristics for the household are used to estimate 1973 spending in each category.[3] Percentage changes in per capita spending in each category are used to update spending in each category to 1981. Since detailed NIPA personal consumption expenditures are published each year in the July issue of the Survey of Current Business, the computer program can be easily updated by changing the data for the current per capita expenditures.

Table 3 shows how the regression results compare to the roughly equivalent mean spending levels for the subsample. The results are similar for the most part, which suggests that the regression model (with the implicit assumption of an additive model) does not grossly violate reality. For instance, food at home amounted to 20.8 percent of current consumption in the subsample. The regression predicted an amount for 1973 which was 20.1 percent of current consumption. Changes in the predicted percentages between 1973 and 1981 suggest the importance of updating to reflect changes over the eight year period.[4]

CONCLUSIONS

This paper has described a method of developing a computer program for estimating spending patterns for different types of households, based on the 1973 BLS Survey of Consumer Expenditures, and updating by the National Income and Product Account per capita consumption expenditures. Similar procedures could be used with more recent cross-sectional expenditure survey data as it becomes available. The computer program developed can be used by consumers and financial counselors as a starting point in discussing family spending patterns.

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[3] The estimates of the typical (e.g., 50 percent) range for each expenditure category have not been incorporated into the computer program. The prediction interval [14, p. 261] can be calculated, but incorporation would greatly complicate the computer program.

[4] Not all categories from the National Income and Product Accounts correspond to the Bureau of Labor Statistics categories. The mortgage payment was updated by the increase in actual and implicit rents in the NIPA accounts, which probably underestimates the actual increases.

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CONSUMERS IN A NEW ECONOMIC CLIMATE

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ABSTRACT

Evolving economic conditions will require adjustments in individual orientations and lifestyles, and in institutional policies, in response to constraints on economic growth and real income. The public will reflect intensified concern for both individual and collective consumer interests, and for policies that provide opportunity and equity on the income side.

Consumer interests are experiencing some stormy weather, caused by both fundamental conditions and current economic and social policies. Weather is a short-term phenomenon; it changes with the seasons, and sometimes more frequently than that. Climate, on the other hand, is a more fundamental, long-term condition.

This paper is addressed primarily to the long-term picture. Its purpose is to make some predictions regarding future economic conditions, and to provide a combination of forecast and hope regarding how our society, individually and collectively, might respond. These projections are cast against the backdrop of current conditions, which in some respects may be just short-term showers or rays of sunshine, and in other respects harbingers of basic change in the climate.

Short of nuclear war--an eventuality that would render these projections, and perhaps the entire human race, null and void--the over-riding factors that will determine the shape of things to come are natural resources and demographics. Additional factors that will play key roles in painting the future scenario are human capital development, technological innovation, evolving lifestyles and orientations regarding what constitutes "the good life," and the social and economic policies which society puts into place to shape its collective condition and experience.

Among the straws in the wind that suggest the nature of future conditions are these:

-Recurrent economic stagflation. We face ever more insistent inflationary pressures, operating in tandem with recessions. While our current economic malaise is in large measure a response to inane economic policy, the ubiquitousness of the threat of stagflation suggests that its root causes are deeply embedded in our institutional structures. A primary wellspring of the problem is the reluctance of capital to be brought into being in a private enterprise economy, in absence of a high anticipated rate of return. This endemic characteristic, which is by its very nature bound to be exacerbated in an economy with a rather mature industrial base, confronts us with a continuing combination of an inflationary bias and the reduction in real investment that occurs, not just when the rate of economic growth slows down, but when the rate of increase abates. Thus we are presented, with disturbing regularity, not with a bunch of blooms with benign stems, nor with the rose of prosperity to go with the thorns of inflation, nor the rose of price stability to accompany the thorns of recession, but with a bouquet consisting completely of economic thorns in the form of both inflation and recession. And the nostrums we increasingly seek are tax breaks which add to the maldistribution of income and wealth, centralization of market power, inflationary pressures, and rewards for speculation and mining the tax laws, while doing nothing to stimulate real investment, or provide jobs or purchasing power for the masses of consumers (which, combined with government expenditures and foreign orders, is the only viable basis for real capital investment decisions).

A noteworthy and somewhat disconcerting development growing out of our recent period of economic instability is the change in the relationship between market institutions and the consumer in financial transactions, with the shifting of economic risk to the consumer-borrower via variable rate home mortgages and even consumer loan arrangements. Here we witness the burden of economic uncertainty relative to market rates being lifted from the financial institution, which enters such arrangements in quest of profits, and loaded on the backs of consumers, the less powerful and less financially sophisticated party in the transaction. That shift creates a significant measure of additional economic vulnerability for many consumers in an already increasingly-uncertain climate; the outcome of that fundamental change in market roles and relationships merits close observation.

-Natural resource constraints. Data on depletion of fossil fuel stocks indicate that we have been using energy as though it were going out of style--and as a result, it is. Mineral resources grow scarce, with projections that world reserves of many important ones will be exhausted within the next half century; and even when available, remaining stocks become more costly to mine. Interstate quarrels over water rights, reports of depletion of underground water resources and soil erosion, and the pace at which we are allocating good land to the last crop it will grow--asphalt--reflect the enormous demands we have placed on those resources to expand production of food, fiber, industrial output, and commercial ventures, and suggest constraints on our future productive capacity, the recent relatively abundant food supply resulting from bumper crops notwithstanding. And our belated realization that we cannot forever treat the environment as if it were just a big combination vacuum sweeper/cesspool to absorb the waste of our industrial production and throwaway lifestyle points to continued need to factor the costs of what used to be regarded as externalities into our production and consumption processes.

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-Population. While the U.S. population gives evidence of perhaps stabilizing at a sustainable level, world population continues to increase at rates that suggest frightening pressures on resources in a finite context. This has serious implications for consumers worldwide, and most certainly for consumers in the U.S., as our high material level of living is threatened by competition for the world's resources. Within the U.S., even assuming a sustainable total population, the changing mix, which will find a proportionately smaller working age group trying to support a proportionately larger group of elderly--and perhaps in some future period also a proportionately larger group of children--has significant implications for the distribution of work effort and rewards, and for the total pie that can be made available for distribution.

-Aspirations and sense of entitlements. While mitigated somewhat by recent and current conditions, the prevailing desire for more, bigger, and better, has generated competing claims on resources and productive capacity by various segments of the U.S. society, and between the developed and developing countries of the world.

-Incomes. Real incomes of workers have failed to make continued gains. Median U.S. family real income was at the same level in 1980 as in 1970, with the modest gain experienced during the decade lost by the end. The only demographic group that gained in real income over the decade was that over age 65. This result prevails despite the tremendous migration of secondary workers, including teenagers, into the labor force. Many families have thus exhausted their primary response to what they feel is an inadequate money income to meet their material aspirations--sending multiple members out to earn wages at market--and thus have no untapped capacity to respond in that manner against further pressures on incomes.

It is likely that the maldistribution of income will be increased as income shares flow increasingly to those with high technical, specialized market skills and/or large capital stocks; that trend is likely to be reinforced by the tendencies to cut social programs and reduce private charity during periods when the public senses an economic pinch, and to provide subsidies and tax breaks for the wealthy. Increased maldistribution of income would not only have unhappy results for consuming units at the lower end of the income spectrum, but impair the effective functioning of our economic system and be detrimental to societal cohesiveness, as well.

If we have failed to solve the problem of poverty amidst affluence during times of economic expansion, when we could take some solace in the notion that a rising tide lifts all the boats, then how are we going to attain a pattern of income distribution that provides an equitable share of the national pie for each of our citizens when the tide is stilled or falling? Failure to develop a satisfactory response to that question would bring with it the evolution of a mean, divisive society, and potential for disintegration of the social fabric.

-Productivity. We have not experienced in recent years the productivity gains that came to be accepted as the normal course of events in an earlier period. The extent to which our bumping against a productivity ceiling is due to slowdown in technological innovation, reduction in rate of capital formation, inadequacy of management to create an environment and adopt processes that enhance productivity, deterioration of the work ethic, failure of our educational institutions to achieve optimal development of our human capital, addition of large numbers of inexperienced young and secondary workers to the work force, or internalization of worker safety and former externalities into production processes, is not readily evident. What does seem apparent, however, is that the cornucopia which resulted from ever-increasing productivity is beginning to reach limits. While a reasonable degree of optimism about the capacity of mankind to develop means of coping with problems is wholesome, and perhaps justified, it is becoming increasingly clear that unbridled faith in technological innovation as a panacea--a breakthrough a day keeps the crisis away--is unwarranted. Indeed, we must keep perspective not only on the limitations of technology to solve problems, but also on the extent to which technological developments have in fact created or exacerbated some of the problems we face.

What we have until recent times blithely regarded as delightful improvements in material well-being, as measured by industrial and commerical output, came about in part at the expense of safety and well-being of workers and consumers and despoliation of the environment. Production of goods at the expense of hazards to life and health of humans, adulteration of our ecosystem, and destruction of aesthetic elements of our habitat, has never been an unmixed blessing, although our profit-oriented, industrial society has been slow in coming to recognize that fact.

-The military dimension. Unless and until humankind learns to live in other than a constant state of active or potential confrontation, the needs and wants of consumers will compete for resources with the demands of a military establishment with its priority claim based upon the specter of threats to national security and survival (with the resulting irony that the resources so diverted create weaponry which makes anyone's survival doubtful, and, if possible, largely unappealing). It is incumbent on each individual everywhere, as citizens of planet earth, to help achieve a world condition in which the war machine does not constitute the drain on resources and threat to our very existence that it is today.

The combination of factors outlined above suggests increasing pressure on our capacity to provide continuing increases in real incomes. A future historian's perspective may well suggest that the late 1960's were the "golden age" in terms of the real cost of living, and that we are on the decline in that regard in the current period. Clearly, the public is beginning to sense that the halcyon days when it was reasonable to anticipate that, as a matter of course, ever-increasing expectations would be realized, are perhaps gone forever.

If the projections of the economic climate presented here are fairly accurate, then we as a nation need to make some fundamental changes in individual orientations, aspirations, and expectations, including a careful assessment of what will constitute the good life for us, and in our economic and social policies and institutional structures. That will be essential for us to come to grips with conditions of the evolving future with minimal pain of adjustments, equitable distribution of that pain, minimal strain on the fabric of society, and maximal societal well-being. This prognosticator is predicting that conditions call not for some minor adjustments in the national thermostat to see us through a chilly spell, but for some major retrofitting and new construction that will serve us well as we hunker down for the long haul.

What are the response tendencies of individual consumers, of business, and of the body politic, to the combination of factors and trends suggested above? The initial tendency, of course, is to hope that we are facing just a brief squall, and that we do not have serious long-term problems on our hands. Everybody hopes for a quick fix, preferablyat the expense of others. Consumers would like to not only maintain their current material lifestyles, but to achieve their aspirations as well. Our orientations and expectations do not enable us to accept the prospect of a decline in material abundance very graciously; the philosophy of "more, bigger, and better" has become rather deeply ingrained in the American mentality. In this quest consumers are encouraged by the promotion of market goods and services as the essence of the good life. Individual consumers are given to seeking their private enjoyments, even if those come at the expense of someone else needing to tighten his/her belt, or at the expense of future generations; humankind has a strong tendency to discount the future at a rather high rate--particularly when the issue involves such long-term considerations as nonrenewable natural resources, and the trade-off is with someone else's future, rather than one's own. This situation--the intertemporal trade-off between one's own satisfactions from use of non-renewable resources in the present and the potential needs of some anonymous future generation--constitutes a rare but noteworthy case in which the interests of people as consumers is not consonant with the long-run interests of the society.

Business enterprise, too, tends to have a short-run orientation. The quest to maximize the interests of the firm, even at the expense of consumer satisfaction, consumer and worker safety, environmental degradation, waste of natural resources, and behavior that is antithetical to the ideal of an effectively functioning market economy, has been sufficiently documented and needs no elaboration here. The quest for market power, protectionism, huge profits from scarcity of necessities, inequitable and ineffective tax breaks, along with the traditional problems of product and service quality, are matters with which consumers will have to continue to cope, both individually and via policy and regulations.

The tendency among policy-makers, meanwhile, has been to address fundamental problems with patchwork responses that are short-run oriented, and cater to the selfish interests of powerful pressure groups.

The combination of self-interest orientations, and the marketplace behaviors and political pressures that emanate from them, provide a seedbed for an inflationary bias, inequities, and dislocations in our economy. Our systems and institutions are quite good at responding to the weather; our societal thermostats permit adjustments to short-term changes in the weather with modest disjunctions and inconveniences. But neither our societal orientations, nor our economic and political systems, nor our institutional structures, are geared to dealing with long-run climatic changes very effectively, and particularly not when the long-run outlook is for a harsh climate. Our system is geared to economic expansion, to the distribution of an increasing bag of goodies; it does not handle effectively the process of contraction, the allocation of pain.

Do the projections outlined above suggest that the outlook for the future is necessarily bleak? Not by reasonable human standards. Leveling off, or modest reduction, in our current level of material affluence would not, after all, constitute squalor. A shift in orientations could well alleviate any sense of deprivation. Scarcity is, in substantial measure, a function of materialism--of greed, as much as need. We need not live in terror of impending Armageddon; dispelling visions of Atlantis will suffice. A strong case can in fact be made that the quality of our life experience could well increase with some reduction in focus on material goods and market services, with increased emphasis on human interactions, on being and doing rather than having. To the extent that the focus of consumerism was ever upon the narrow matter of acquisition and enjoyment of more and more market goods and services, it has contributed to whatever bind we may sense as we face the future; to the extent that the movement contributes to realization of efficiencies in the need- and want-satisfying process, and to providing for equitable access to the national larder, it will enhance the well-being of our society as we journey into the unfolding future.

In the context of these conditions and projections, what long-term behavior of consumers, individually and collectively, might we forecast? The most fundamental, pervasive factor may be a reassessment of what constitutes the good life. There seems to be growing restiveness about the meaning and the quality of life. There are signs that, while still materially oriented, at least some of the populace are rethinking their goals, altering traditional lifestyles, becoming sensitive to the increased incidence of social pathologies--which both impact negatively upon our life experience and place an additional drain on our resources--and reflecting that a virtually unmitigated quest for material affluence and a strong wave of me-ism have not resulted in the anticipated improvement in individuals' assessments of the quality of their lives. We may well be rounding the turn toward an evolution of declining expectations. Early evidence exists in the shift to less costly transportation; indications that many young people are giving up on the American dream of owning their own home, at least until a later stage of life, and shifting their sights from the spacious suburban ranch style house that had come to be regarded by their parents almost as a right of any hard-working American; the increased incidence of young adults remaining in their parental homes during their early working years; and the decline in the birth rate, to the extent that economic pressures are responsible. We may be witness to the first generation of Americans whose material lives may not be better than those of their parents. If that is the case, then better that development be met with a change of life orientations and expectations than with diehard insistence that any constraint on our material level of living constitutes doomsday. The latter perspective would be detrimental to individuals and put enormous stress on our economy and society.

The future is likely to witness, on balance, increased reliance on home production, intra- and inter-household grants, and search for life satisfactions outside the commerical markets for goods and services. The quest for creative endeavors, self-fulfillment, and activities involving interpersonal relationships may contribute to that direction. If market goods and services become increasingly costly in real terms, people will quite logically turn more of their energies toward home production activities. Indeed, it is interesting to speculate whether, as energy and other resources become more scarce and high-priced, and as the real incomes that can be earned at market are squeezed, the market might lose a sufficient amount of its advantage over the household as a production unit by virtue of specialization and economies of scale, that some of its current comparative advantage might shift to the household.

Market transactions are likely to experience a trend toward relatively more services, compared with goods. Communication, information, and education seem to be prime areas for expansion, particularly in view of the fact that they are not exhausted nor necessarily diminished by use, and that modern technology permits dissemination of ideas at relatively modest cost.

Unless we adopt new economic and social policies to create a greater sense of security regarding income flows, conditions are likely to make consumers somewhat more cautious than in times past. Such a development would have substantial implications; consumers would not again stave off a recession by continued spending at high levels in the face of inflation, as they have in recent periods when the stimulus for the spending was fear of facing even higher prices in the future.

Consumers in the economic climate of the future will be increasingly insistent upon satisfactory returns for their outlays, and upon satisfaction of grievances. People will be more sophisticated and effective in their role as consumers, will put greater emphasis on quality and durability and seek functional value in purchases. They will be increasingly conscious of operating and repair costs, be more willing to make greater initial outlays to reduce such costs, and keep and use things longer. They will seek efficiencies in the consumption process, demanding improved information as a basis for consumer choice, rather than having to rely upon guesswork or the superlatives of product promotion. Economies will be sought through increased formation of cooperatives and buying clubs, and through multiple-household ownership of expensive, infrequently-used goods. There is likely to be more interest in, and support for, consumer education programs in the formal school system, adult education programs, and mass media programming. And the consumer movement will likely find somewhat greater strength in local consumer organizations, many of them focused on one or a few issues. Indications are that sensitivity to consumer interests has become embedded in the American consciousness, and that consumerism has become an institutionalized element of our societal framework.

The income side of the ledger will vie strongly for people's attention. There will be continuing concern for employment opportunities, for adequate transfer programs to sustain the otherwise needy, for greater equity in income distribution, and for reform of a tax system pock-marked with so many loopholes that nominal rates are a mockery and honest citizens are increasingly drawn to the underground economy in an effort to create what they perceive to be equity by establishing their own tax shelters. Unless corporate management and organized labor establish an on-going accord which reduces inflationary pressures, sentiment will develop for a national incomes policy. Employment, incomes, tax equity--these elements have in them the seeds of social disharmony that will make the battles over truth in packaging, product safety, meat grading, and similar consumer issues, look like Sunday-school picnics.

Meantime--and particularly during the regime of the current national administration--we increase the pressures on that most vulnerable economic unit, the household, which is exhorted to both spend more and save more, and to keep a stiff upper lip and support "staying the course" when times are tough, in a society in which our destiny is determined not merely by a strong back, a willing spirit, and the invisible hand of Adam Smith, but by the very visible hands of the President, the chairman of the Federal Reserve Board, the Congressperson, the lobbyist, the captain of industry, and the labor boss. Surely a civilized society will expect more of its government than that it sit idly by with somewhat detached interest while economic forces work their effects in unbridled manner on the powerful and the weak alike--and that, at a minimum, it not aid and abet the cause and condition of the already powerful. Hopefully the experience of recent times will give us renewed appreciation for consumption as a central element in our economic process, and hopefully we will come eventually to recognize the essentiality of a fairly egalitarian distribution of income to the effective functioning of our system. And surely we will learn a lesson from the absurdity, futility, and inequity of recent policies whose net result has been that the people who should have paid for a larger portion of the Federal expenditure have instead wound up owning more Federal debt.

While matters that affect consumers' pocketbooks directly will command their strong attention, sufficient sophistication and sensitivity toward some broader issues will also keep those on the forefront of the public's concerns. It seems likely that when the current wave of anti-government, anti-regulation, anti-tax sentiment has spent its vigor, calm reflection by our citizens regarding societal needs may well lead to renewed demand for services provided by the public sector. Certainly the public is not long going to forego decent education, health care, police and fire protection, recreation areas, and other highly desirable elements of our life condition, or to permit its public buildings, roadways, and bridges to fall into a complete state of disrepair, and opt instead for more bangles, baubles, and beads.

Such matters as conservation of nonrenewable resources and environmental quality, consumer and worker safety, trade barriers, subsidies, market structure, regulations, and corporate accountability to the society will likely receive increasing attention from the public and consumer organizations. The singular interests of corporate America will not be left unchallenged; consumers, workers, and the public have come to view themselves increasingly as stakeholders in the productive enterprise of the nation, and will continue to press for input into policies that will make the production and distribution of goods and services increasingly accountable to that balance of interests. Is it too optimistic to predict that, if efforts are made to increase material abundance through the marketplace by reversion to environmental pollution, waste of nonrenewable natural resources, despoilment of our natural heritage, and reduced efforts to assure worker and consumer well-being, coalitions of consumerists, environmentalists, conservationists, and labor interests will band together to quell such a tide? To the extent that possible efforts to render such groups impotent by turning them against each other in the interests of unbridled commercialism are successful, to that extent will the societal fabric be rent, and an unhealthy environment for consumers, business, and government prevail.

Fortunately, we can do something about the economic weather--and even the climate--through the aggregate of our individual actions and the policies we put into place as a society. Our responsibility as a generation in the long sweep of history is not to be epilogue to a glorious past, but prologue to the best that the future can be. The evolving economic climate presents a challenge that will demand creativity, new orientations, new modes of conducting the affairs of society, and our very best efforts, if we are to fulfill that responsibility.

SAFETY AND PERFORMANCE POLICIES: WINNERS AND LOSERS AMONG CONSUMERS

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ABSTRACT

While consumer protection policies are often thought of as shifting wealth and power from sellers to buyers, these policies can also redistribute wealth and power among consumers. This paper reviews current knowledge about how the benefits and costs of safety and performance policies are distributed among consumers. It demonstrates the multiple bases of such distributional effects as well as considers their political implications.

The aim of most consumer protection policies is to increase the rights and powers of buyers relative to those of sellers (19). And there have been some attempts to evaluate the benefits and costs to consumer of these policies (4, 5, 8, 15, 32, 34, 41). In such studies, consumers are usually treated as an undifferentiated group when, in fact, the benefits and costs of consumer protection policies are usually distributed among different types of consumers.

The uneven impact among consumers of policies which regulate prices has received some attention, especially interest rate ceilings on consumer credit (19, 14, 16, 17, 35, 36, 42) and rent controls (1, 3, 18, 24, 31). There has been little consideration, however, of the distributional impacts among consumers of policies regarding *safety and performance*. In distinguishing between policies with collective (undifferentiated) versus differential impacts, Nadel (27) uses health and safety policies as the quintessential examples of policies "which affect citizens at every income level nearly equally" (p. 219). This paper explores whether benefits and costs of safety policies are not only differentially distributed according to income, but according to other characteristics as well.

Much of the evidence reviewed is speculative in nature. Therefore, this paper only *opens* the discussion of the distributional effects of consumer safety and performance policies. Policies regarding automobiles, food additives, power lawn mowers, furniture, and home insulation are used to exemplify the distributional effects of safety policies. Performance policies are illustrated by energy efficiency standards, drug efficacy requirements, and occupational licensing. The authors welcome information regarding additional examples.

SAFETY

The major initiatives to promote consumer safety reflect the efforts of three federal agencies: the National Highway Traffic Safety Administration, the Food and Drug Administration, and the Consumer Product Safety Commission. This discussion of the distributional effects of consumer safety policies therefore covers automobiles, food and drugs, and household products.

Automobile Safety

Numerous estimates have been made of the benefits (28, 34, 37) and costs (28, 46) of automobile safety regulations, but less is known regarding the distribution of these benefits and costs. Several assertions follow from the fact that safety regulations increase the price of new automobiles. One is that safety-related price increases represent a smaller percentage of the price of more expensive cars; another is that they represent a smaller percentage of the income of more affluent consumers (47). Both assertions suggest that the costs of automobile safety regulations are regressively distributed. The observation that safety-related price increases force less affluent consumers to postpone new car purchases or shift from the new to the used market leads to the same conclusions (11).

Assertions such as those above reflect the tendency to conceptualize distributional impacts along the dimension of income. The groundwork for a very different view is laid by Colantoni, Davis, and Swaminuthan (6). They demonstrate that the impact of auto safety standards depends on an individual's (1) willingness to accept risk and (2) accuracy in perceiving risk. The authors do not pursue the implications of the first factor; they simply assume that risk aversiveness is a positive function of income. The implications of differences in the accuracy of risk perception are considered in detail, however.

First consider an individual who accurately perceives the safety risks of driving a car without safety equipment and considers these risks acceptable. Safety standards force this type of consumer to behave irrationally, that is, to buy more safety and less of something else than he/she otherwise would. Now consider an individual who accurately perceives auto risks and considers them unacceptably high. Safety standards help this consumer to the extent that mandatory safety features cost the consumer less than safety features offered as optional equipment.

Finally consider individuals who misperceive the safety risks involved in driving. If a person substantially underestimates driving risks, safety standards can improve efficiency. In other words, if such people had been fully aware of the risks of driving, they might have purchased safety features (and foregone some other item). If driving risks are overestimated, safety standards do not change the consumer's welfare because the safety features would have been (mistakenly) demanded anyway.

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Overall, then, decisions regarding automobile safety standards can be analyzed largely as a "problem of weighing the current loss of one class of consumer against the potential gain to another class" (6). Risk underestimators are helped at the expense of accurately-perceiving risk acceptors. The broader questions raised by this analysis are:

(1) Are there systematic individual differences in the willingness to accept risks (both physical and financial)?
(2) Are there systematic individual differences in the accuracy of risk perception?

Some recent research has examined public willingness to accept the risks of nuclear power (25), while other research addresses the more general question of what determines the intensity and accuracy of risk perception (22, 39, 43). Yet, virtually nothing is known regarding individual differences in the magnitude and accuracy of risk perception (39). Some of the more likely bases for individual differences in risk perception are educational attainment, age, and gender. To the extent that such differences can be shown, discussion of the distributional impacts of safety standards will have to consider more than differences in income.

Food and Drug Safety

The food and drug safety laws of greatest current importance are amendments to the Food, Drug, and Cosmetic Act of 1936 -- the Food Additives Amendment of 1958 (especially the "Delaney Clause") and the 1962 Amendments. We will argue that the 1962 Amendments are primarily designed to improve drug performance rather than drug safety. Consequently, the 1962 Amendments will be discussed in a later section.

The heart of the Food Additives Amendment of 1958 is the so-called Delaney Clause. The clause essentially bans from the food supply any additive that has been found to cause cancer in man or animal. As a practical matter, the Delaney Clause has rarely been invoked; and in the case of saccharin, it has been ignored. As a basis for food or drug safety policy, however, the Delaney Clause continues to generate heated debate and legislative attempts to alter it. The Delaney Clause is controversial because it represents a "no-risk" approach to safety decisions, one in which an activity must be prohibited regardless of the relative magnitude of its risks and benefits (20). Applied in the area of auto safety, the no-risk approach could lead to the banning of all cars or to requirements that made cars into slow-moving fortresses.

For our purposes, the question is: what are the distributional impacts of a no-risk approach in food and drug safety policy? Different distributional issues are raised by each of two recent subjects of controversy: sodium nitrite and saccharin.

Sodium nitrite is used to preserve cured meats and to prevent botulism in particular. In addition, sodium nitrite improves the color and taste of cured meats as well as reduces the financial costs of handling, storing, and buying cured meats. The problem with sodium nitrite is that it may combine with amines and amides to produce carcinogenic nitrosamines. There is also some evidence that nitrites are carcinogenic by themselves (20).

The proposed ban of sodium nitrite raises the following distributional issue. Suppose that in the absence of sodium nitrites cured meats would require additional effort on the parts of both sellers and buyers of cured meats and that these efforts would increase the financial and time costs of consuming cured meats. For example, people would have to buy smaller quantities of meat on a more frequent basis. Therefore, the costs of such a ban would fall most heavily not only on people with relatively low incomes, but also on people who lack the time to properly select, handle and store cured meats (e.g., single-parents or consumers in rural areas).

Lave (20) suggests an additional way of thinking about the distributional impacts of policies designed to reduce exposure to carcinogens. He points out that the "genetic heterogeneity of the population means that some people are likely to be highly resistant to a chemical or biological insult and others highly sensitive" (p. 85). While no doubt true, this insight will not be useful in policy formulation unless and until these genetic differences can be shown to correspond to characteristics such as age, race, gender, ethnically, or geographical location.

What to do regarding the artificial sweetener saccharin raises the issue of intergenerational distributional effects. It is a little known fact, but the studies which led the Food and Drug Administration's proposal to ban saccharin showed that saccharin increased the incidence of cancer in the second-generation male rats tested (12, 26). Let us assume that findings based on rats are generalizable to human beings. Then the decision on whether to ban saccharin involves balancing relatively certain benefits to current consumers (e.g. weight control) against the less certain health risks to their male offspring. Saccharin thereby exemplifies the larger set of issues involving mutagens (substances capable of genetic alteration). Given the lack of political power of future generations, it should not be surprising if questions concerning mutagens are resolved to the benefit of present consumers.

Product Safety

The Consumer Product Safety Commission is in charge of promoting the safety of consumer products not regulated by either the National Highway Traffic

Safety Administration or the Food and Drug Administration. In this capacity, the CPSC has issued regulations covering such disparite items as baby cribs, fire detectors, bicycles, home insulation, matchbooks, and swimming pool slides.

A recurring theme in the CPSC's deliberations is the contention that product safety standards raise the price of bottom-of-the-line models and brands by a greater percentage than more expensive models and brands. The corollary observation is that the costs of such standards fall with disproportionate weight on lower-income consumers (13). For example, consider the CPSC's proposal that all power lawn mowers be equipped with a device which prevents mowers from being operated in potentially dangerous positions. There is no dispute that the new device would raise the cost of power mowers, although estimates differ. The largest percentage increases would be at the lower end of the mower price range, (e.g., walk-behind mowers compared to riding mowers). So the claim has been made that the costs of the standard would "be borne by those individuals least able to afford them (21, p. 62)". In addition, one could hold that lower-income consumers would prefer that less safe but less expensive models not be removed from the market.

These arguments echo the points made with regard to automobile safety standards, namely, that the costs of safety policies are differentially distributed according to income. Other safety policies reveal additional bases for distributional effects. One such example concerns flammability standards for furniture. Reacting to the high number of upholstered furniture-related fires, the CPSC proposed the elimination of certain flammable combinations of fabric, filling materials, and construction. To understand the distributional effects of this standard, it is important to know that over half of the injuries and deaths in upholstered furniture fires can be directly traced to ignition by cigarettes. Consequently, the benefits and costs of the furniture flammability standard depend on whether a person is a smoker. Whereas smokers would receive fire protection (which they might or might not want), non-smokers would pay more for their furniture in exchange for largely unnecessary fire protection (7). Unlike the cases of automobiles and food in which the safety benefits are fairly evenly distributed, flammability standards exemplify the situation in which the most important distributional effects concern the benefits rather than the costs of the policy.

A final instance in which a CPSC safety policy has had significant distributional effects pertains to the banning of urea formaldehyde foam insulation. The Commission found that this form of insulation can cause eye irritation, respiratory problems, headaches, nausea, and possibly cancer. Banning this insulation would prevent these problems among prospective purchasers of insulation. In accomplishing this goal, however, owners of homes with urea formaldehyde insulation already in place will likely experience a decline in the value of their property. These owners have requested special subsidies to enable them to reinsulate their homes and thereby mitigate this distributional outcome. To date, these requests have not been granted. Thus, the case of urea formaldehyde foam represents the situation in which bans (or standards) reduce the value of goods currently owned by some consumers. Such policies benefit prospective (for example, younger) consumers to the detriment of consumers who already own and cannot readily replace a consumer good.

Higher Prices Versus Higher Taxes

A final observation is necessary regarding the distributional impacts of policies designed to promote safety. There are many alternatives for reducing traffic-related injuries and death. Some of these alternatives entail higher consumer prices (e.g., safety features on cars) while others entail higher taxes (e.g., higher federal taxes to finance programs to set auto safety standards and to create and deliver auto safety education programs).

The choice among alternative methods of reducing injuries and deaths must consider their relative efficiency, but their equity can be considered as well. Pursuing the example of safer cars versus safety education programs, higher car prices are likely to be regressive in their impact and higher federal taxes are likely to be progressive. Similarly, stricter drug safety laws and improved medical care (whether preventative, emergency, or curative) are policy alternatives. Higher prices for drugs are likely to be regressively distributed, while higher taxes for improved medical treatment (e.g., Medicare or Medicaid) are more progressively distributed.

Policies which raise consumer prices do not always distribute costs regressively (e.g., safety standards for yachts). Nor do policies which raise taxes always distribute costs progressively (e.g., policies which raise sales taxes). Nevertheless, the possibility exists that the choice between a policy which raises consumer prices and a policy which raises taxes may have substantial distributional consequences. And to complicate matters further, a decision based on preferred distributional consequences may conflict with a decision based on economic common sense (e.g., improving highway features is less cost-effective than mandating air bags).

PERFORMANCE

Whereas safety standards are meant to reduce the risk of physical injury and death, product performance standards are designed to guarantee consumers a given level of product quality or performance. The distributional impacts of three types of performance standards will be discussed here: (1) energy efficiency standards for automobiles and appliances; (2) efficacy requirements for pharmaceuticals; and (3) licensing of occupations.

Energy Efficiency Standards

The Motor Vehicle Information and Cost Savings Act of 1972 requires that the automobile industry double the fuel economy of its fleet of new passenger cars between 1974 and 1984. Specific miles-per-gallon targets are set for each model year. Similarly, the National Energy Conservation Policy Act requires the Department of Energy to set energy efficiency standards for household appliances. These appliance standards have not yet been implemented at the national level, but several states have enacted energy efficiency standards for various appliances (notably California, New York, and Minnesota).

From the point of view of someone interested in distributional effects, all these energy efficiency standards have something in common -- the rate at which energy savings compensate for higher initial purchase prices depends on how intensively the product is used. For example, a report by the Regulatory Analysis Review Group (38) states that a Wisconsin consumer who purchases a medium-sized room air conditioner meeting the proposed 1986 standards would have to wait almost 17 years before the investment in energy efficiency paid for itself. In contrast, a person living in Texas, where the need for air conditioning is greater, would have to wait less than three years for the investment to pay off. What is a forced but reasonable investment for the Texan is a burdensome tax to the Wisconsin consumer.

The individual characteristics which are related to the intensity of a product's use vary somewhat from product to product. Traveling salesmen benefit from fuel economy standards more than retired widows. Large families soil more clothes than small families, so they would benefit more from energy efficiency standards on washing machines. Thus, the distributional impacts of energy efficiency standards will depend on the product involved. The important point is that these distributional impacts need to be analyzed in terms of characteristics such as occupation, region of the country, family size, and age, not just income.

Drug Efficacy

Although passed in the wake of the thalidomide tragedy, the 1962 amendments to the Food, Drug, and Cosmetic Act were designed to prevent the marketing of ineffective drugs. Unsafe drugs were already prohibited by earlier legislation. The 1962 amendments have been criticized as being unnecessary and costly (33, 45), but no attention has been focused on their distributional impacts.

The amendments can be conceptualized as a form of information -- the efficacy of a drug is certified, thereby eliminating the need to determine efficacy from other sources of information (including personal experience). Thus conceptualized, the benefits of the amendments will go disproportionately to those consumers who are least likely to seek, understand, and use alternative sources of information. There is abundant research which shows that low educational attainment, low income, and minority racial status are associated with low information use (2, 9, 23).

The costs of the 1962 amendments may also be differentially borne. Reduced pharmaceutical innovation and delay in the marketing of new drugs have been attributed to the added testing required by the amendments. If this attribution is warranted, the costs of the amendments would be distributed according to those characteristics which determine the need for new drugs -- primarily age, present health status, and genetic predisposition to certain diseases.

Occupational Licensing

Hundreds of different occupations are subject to state licensing -- not just attorneys, accountants, physicians and teachers, but auctioneers, midwives, milk samplers and weather modifiers as well. Given the difficulty of judging the quality of services offered to the consumer, the purpose of occupational licensing is to insure the quality of services rendered. At the same time that it insures quality, occupational licensing also raises prices by restricting the supply of services. High prices may in turn lead consumers to substitute lower quality services (e.g., do-it-yourself services) for the expensive services of licensed practitioners. An exploratory study by Carroll and Gaston (5) suggests that this shift is so considerable that restrictive licensing may be associated with a lower level of service quality for consumers taken as a whole. In other words, restrictive licensing increases the quality of services for those consumers who employ licensed practitioners, but this increase in quality may be offset by the unavailability of services to other consumers. For example, if licensing of electricians forces prices up or makes electricians unavailable in rural areas, do-it-yourselfers may end up electrocuting themselves. Thus, the costs of occupational licensing may be distributed according to income as well as geographical location.

CONCLUSIONS

This paper demonstrates instances in which consumer safety and performance policies can have differential impacts on consumers, but two quite different situations can be distinguished. In one situation, all consumers are net beneficiaries from a policy, but the net benefits to some consumers are greater than those for other consumers (e.g. banning carcinogens). In a second situation, some consumers are net winners at the expense of other consumers who are net losers (e.g. occupational licensing).

The political ramifications of these two situations may be vastly different. The first situation poses the threat of consumer inaction due to the "free rider" mentality in which the relatively light beneficiaries expect the relatively heavy beneficiaries to bear the costs of political lobbying. The second situation causes the possibility of conflict and confrontation among consumer groups, a situation in which pro-consumer legislation is easily defeated (45). Such conflicts might be resolved by logrolling among groups representing different types of consumers (e.g., different geographical regions or age groups). However, the fact that the benefits and costs of several safety policies may not be distributed according to the same consumer characteristics, reduces the chances of trading political support across issues. In any event, the differential impacts of consumer safety policies may constitute an important barrier to the mobilization of consumer pressure in the legislative and regulatory arenas.

Regardless of whether distributional effects reduce the involvement of consumer groups in the formulation of safety policies, public policy makers may wish to consider these distributional effects (among businesses as well as among consumers) so that consumer policy is congruent with general social policy. If policy makers display a willingness to consider distributional impacts, consumer researchers will be faced with a new challenge -- to express distributional effects in more precise and quantitative terms than has so far been the case.

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PRESIDENT KENNEDY'S CONSUMER MESSAGE TO CONGRESS: A TWENTY YEAR VIEW

Elizabeth Dolan and Joel Rudd

ABSTRACT

President Kennedy's 1962 Consumer Message to Congress, in addition to outlining the "Consumer Bill of Rights", provides a consumer problems agenda. The present paper uses Kennedy's consumer problems agenda to develop a framework for analyzing consumer protection legislation and regulatory actions over the last 20 years.

More than twenty years have elapsed since President John F. Kennedy sent his Consumer Message to Congress. This Consumer Message, the first of its kind, has been identified as a key event in chronologies of the consumer movement [e.g., 3, 5, 8] and has been frequently cited by consumer researchers and policy makers to justify a line of research or a proposed policy change [e.g., 4]. Indeed, many statutes and regulatory actions were initiated by this Message.

Kennedy's Message has been remembered primarily for what has become known as the "Consumer Bill of Rights": the right to be safe, to be informed, to choose, and to be heard [1, 2, 9]. However, an examination of the Message reveals that the consumer rights passage plays a relatively small role--the thrust of the Message is programmatic rather than polemic. Kennedy identifies a number of consumer problems which were of growing concern to both citizens and politicians. We can group these concerns into a consumer problems agenda:

(1) Food and drug safety
(2) Transportation safety
(3) Financial and credit protection
(4) Information and representation at the federal level
(5) Vigilence against monopolies
(6) Effective regulation in other areas

Although the Kennedy Message traditionally marks the beginning of the third era of consumerism, interest in consumer problems had been growing for several years [5]. The complacency which had characterized the 1950's was dissolving. Median income was rising and the level of living increased steadily throughout the 1950's; continued economic growth was predicted for the 1960's. People felt secure about their economic future and were beginning to become concerned about marketplace abuses. Kennedy conceptualized this new attitude in his "new Camelot": the concern about better social and marketplace conditions. The political climate was becoming more amenable to consumer protection. Liberals in Congress were gaining power on key committees and, in 1964, a very liberal Congress was elected [11]. The consumer problems agenda outlined in the Kennedy Message became part of the political agenda.

Kennedy asked in his Message that a number of different reform measures be enacted through either legislation or regulation. Only a few were dealt with quickly. Many of his recommendations became law only after years of debate and effort.

The purpose of this paper is to examine what has been accomplished on Kennedy's consumer problems agenda in the 20 years since his Message. We use the consumer problems agenda set forth by Kennedy not because we believe him to be a consumer visionary, but because his Message set such a broad agenda for consumer activists. The Message served more as a standard for the neophyte consumer advocates in Congress and in the private sector than as an immediate catalyst for action. We will identify those federal legislative and regulatory actions which are directly related to Kennedy's agenda recommendations and those actions which we consider outgrowths of his recommendations. Only federal consumer protection regulation and legislation relevant to Kennedy's agenda are considered (Table 1). We do not attempt to identify every federal regulatory and legislative action having an impact on consumers. Most conspicuously absent are many energy and environmental problems and resulting actions which were unforeseen by Kennedy. While Kennedy's Message did mention air pollution in connection with transportation safety and health, it said little else about the environment. In addition, since Kennedy's Message dealt with what the federal government (Congress and the various regulatory agencies) could do about those consumer problems in his agenda, actions taken at the state or local level in the last 20 years are not reviewed in this paper.

Table 1 provides an overview of the consumer legislation and regulation discussed in the remainder of the paper. The table is organized to provide a summary of Kennedy's consumer problems agenda, his recommended solutions, legislative and regulatory actions related to those recommendations, and actions which follow the spirit of or expand upon those recommendations.

FOOD AND DRUG SAFETY

Kennedy prefaced his recommendations for strengthening programs in the area of food and drug safety with this statement: "Thousands of common household items now available to consumers contain potentially harmful substances. Hundreds of new

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of new uses for such products as food additives, food colorings, and pesticides are found every year, adding to new potential hazards...(N)ew drugs are being placed on the market with no requirement that there be either advance proof that they will be effective in treating the diseases and conditions for which they are recommended or the prompt reporting of adverse reactions" [6, pp. 3, 6]. The main thrust of Kennedy's recommendations was to substantially increase the staff and funding available to both the Food and Drug Administration and the Department of Agriculture to enable these agencies to provide better levels of consumer protection through increased inspection and pre-market testing.

The impetus for the rapid enactment of the recommendations for drug safety and efficacy came more from the thalidomide scandal than from Kennedy's suggestions [5]. The pharmaceutical industry could not oppose the stricter legislation without appearing to endorse deformed babies. While Kennedy's call for a mechanism which would require the removal of unsafe and ineffective drugs has not been directly acted upon, the concept of removal of unsafe products from the market has been applied to toys and food additives (1966 Child Protection Act, **et seq.**). Product safety and health protection were further expanded by Congress in the late 1960's and throughout the 1970's (1967 Flammable Fabrics Act Amendments, **et seq.**). Congressional concern about hazardous products reached its zenith in 1972 with the creation of the Consumer Product Safety Commission.

TRANSPORTATION SAFETY AND HEALTH

Kennedy cited the increased use of both highways and airways by Americans as the basis for his recommendations concerning transportation safety. According to Kennedy's Message, the Federal Aviation Administration was then in the process of redesigning the air traffic control system to enhance safety and efficiency for future air traffic. Several other agencies also were working to strengthen highway safety standards. Federal agencies, as well as the automobile industry, were called upon in the Message to jointly review "those changes in automobile design and equipment which will help reduce the unconscionable toll of human life on the highways and the pollution of the air we breath" [6, p. 3].

When the automobile industry and federal agencies made no progress in developing design and air pollution standards, Congress began to pass legislation to accomplish these goals, although Ralph Nader's **Unsafe At Any Speed** [10], not Kennedy's Message, is often viewed as the impetus. Once the onerous task of overcoming the objections of a powerful industry was surmounted, the view of consumers as potential victims of the products they own was easily accepted. The subsequent legislation not only dealt air pollution and safety design, but also with providing information to consumers concerning automobiles (1963 Clean Air Act, **et seq.**). Later Congressional actions expanded transportation safety standards to vehicles other than automobiles and provided for recall of defective automobiles (1970 Traffic and Motor Vehicle Safety Amendments, et seq.).

FINANCIAL AND CREDIT PROTECTION

Protection for consumers' finances is a third item covered in the Consumer Message. Kennedy reported that legislation recently had been passed to strengthen the insurance program of the Federal Savings and Loan Insurance Corporation and that the Securities and Exchange Commission had undertaken an investigation of the securities market which would provide the basis for later regulation and legislation. Increased enforcement of federal fraud statutes by the Postmater General and the Justice Department was also reported. Finally, Kennedy urged that "truth-in-lending" legislation be passed which would require creditors to disclose to borrowers, in advance, the actual amount and rate of payment for credit.

It was several years before truth-in-lending became law through the herculean efforts of Senator Douglass (1968 Consumer Credit Protection Act). The format was essentially what Kennedy had recommended, i.e., a disclosure law. Once truth-in-lending became law, Congress was quick to recognize other abuses related to the consumer credit industry and in the succeeding years passed several laws to further assist consumers in their credit transactions (1970 Credit Card Act, **et seq.**). Additional legislation and rules provide consumers with a broad variety of protections in their financial dealings (1970 Share Insurance Amendments to the Federal Credit Union Act, **et seq.**).

INFORMATION AND REPRESENTATION AT THE FEDERAL LEVEL

Kennedy's Message contained a call for federal agencies to develop and make available information of use to consumers. In those cases where such information was already a part of an agency's routine research activities, an effort to make the information more readily available to consumers was requested. In addition, the Message highlighted the efforts of the executive branch to ensure that the consumer interest was considered in governmental decision making by creating a liaison between consumers and federal agencies. Specifically, the Message reported directives mandating the creation of a Consumers' Advisory Council and the appointment of a special assistant for consumer affairs in each federal agency where activities bear significantly on consumer welfare. Finally, a directive provided for a pilot program to disseminate consumer publications in post offices.

Kennedy's Consumers' Advisory Council has evolved into the Office of Consumer Affairs, now a part of the Department of Health and Human Services (1964 Executive Order 11136, Establishing the President's Committee on Consumer Interests and the Consumer Advisory Council, et seq.). Efforts in the 1970's to create a cabinet level Department of Consumer Affairs failed.

VIGILENCE AGAINST MONOPOLIES

In his Message, Kennedy recommended that steps be taken to minimize the negative effects of anticompetitive practices by business. First, it was recommended that the Federal Trade Commission be empowered to issue temporary cease-and-desist orders against unfair competitive practices while a case is pending before the Commission. Second, firms would be required to give advance notice to the Department of Justice concerning their intentions to merge, enabling the department to advise the firms if the merger would be challenged. Over a decade passed before these recommendations were implemented (1973 Trans-Alaska Pipeline Authorization and Federal Trade Commission Improvements Act, et seq.; 1974 Anti-Trust Procedures and Penalties Act, et seq.).

EFFECTIVE REGULATION IN OTHER AREAS

Kennedy reported on the activities of several federal regulatory agencies and recommended increased funding and staffing to provide more effective consumer protection. Many of the actions Kennedy called for under this agenda item have been initiated (1978 CAB Airline Overbooking Rule; 1978-1981 CAB Charter Flight Rules, et seq.; 1962 All-Channel Receiver Act, et seq.; 1978 Public Utilities Regulation Policy Act, et seq.; 1963 FTC Sleeping Bag Advertising and Labeling Rule, et seq.; 1980 Household Goods Transportation Act). In addition, the Message reported investigations underway into "misleading, fraudulent, or unhelpful" packaging and labeling practices which often seem "designed to conceal rather than reveal the true contents of the package" [6, p. 10]. Kennedy's proposals to improve packaging and labeling, dubbed "truth-in-packaging", were incorporated in the 1966 Fair Packaging and Labeling Act. The Truth-in-Packing concept was greatly expanded in the 20 years after Kennedy's Message (1965 Federal Cigarette Labeling and Advertising Act, et seq.). Recent actions affecting regulation have tended to delimit regulatory authority, often in the name of increased effectiveness (1980 Regulatory Reform Act, et seq.).

CONCLUSION

Kennedy's Consumer Message provided an invaluable service to consumer advocates not only by proposing a "Consumer Bill of Rights" but also by developing an agenda of consumer problems. His consumer problems agenda and proposed remedies have, for 20 years, provided a significant point of reference for consumer protection legislation and regulation. Many subsequent legislative and regulatory actions closely resembled Kennedy's recommendations, but were often enacted only after considerable debate (e.g., 1968 Consumer Credit Protection Act). Others saw fruition in a form quite different from that envisioned by Kennedy, but necessary given the tenor of the times (e.g., 1966 National Traffic and Motor Vehicle Safety Act).

Mayer [7] has suggested that during the 1970's the idea of what constitutes a consumer problem has widened. This view is supported by the large number of legislative and regulatory actions which are extensions of Kennedy's original recommendations. The focus of consumer concern has broadened and, in response, actions taken in the name of the consumer have multiplied.

The 20 year perspective provided by this paper helps illuminate what has, and has not, been accomplished since Kennedy's landmark Consumer Message. Much of what has been achieved in the name of consumer protection used Kennedy's Message and the agenda it contained as a springboard. The legislative and regulatory actions provide a useful record of the impact of Kennedy's Consumer Message and the spirit of the third era of consumerism.

TABLE 1
Selected Consumer Legislation and Regulation 1962-1982

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
I. Food and Drug Safety		
Increased inspection in food processing, meat packing, and drug manufacturing	1967 Wholesome Meat Act 1967 Clinical Laboratories Licensing Amendment 1968 Poultry Inspection Act 1970 Egg Products Inspection Act	1962 FDA Current Good Drug Manufacturing Practice Rule 1969 FDA Current Good Food Manufacturing Practice Rule
Unsafe, ineffective drugs to be removed		1966 Child Protection Act (to remove unsafe toys) 1969 Child Protection and Toy Safety Act 1971 Lead-Based Paint Poisoning Prevention Act (to remove lead-based paint)

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
		1974 Lead-Based Paint Poisoning Prevention Act Amendments 1978 USDA Sodium Nitrite in Bacon Rule FDA Rules Removing Unsafe Food Additives: 1970 Cyclamates 1977 Saccharin (1977 Saccharin Study and Labeling Act, to delay removal) 1977 Acrylonitrile Bottles 1979 Diethylstilbestrol (DES), with USDA 1980 Liquid Protein
Drugs and devices to be tested for safety and effectiveness prior to marketing	1962 Kefauver-Harris Drug Amendment 1976 Medical Device Amendments	1977 FTC Hearing Aid Rule (to require hearing test prior to purchase) 1978 FDA Good Manufacturing Practices for Medical Devise Rule
Cosmetics to be tested for safety prior to marketing		1976 FDA Cosmetic Labeling Rule
Regulate pesticides	1972 Federal Environmental Pesticide Control Act	
Assignment of generic names to drugs	1962 Kefauver-Harris Drug Amendment	1972 Drug Listing Act
Control barbituate and amphetimine distribution	1965 Drug Abuse Control Act 1966 Narcotic Addict Rehabilitation Act 1970 Controlled Substances Act 1970 Control Substances Import and Export Act 1972 Drug Abuse Prevention, Treatment and Rehabilitation Act	
FTC may require drug company advertising to physicians to disclose safety and efficacy		

Additional Health and Safety Related Actions:

1967 Flammable Fabrics Act Amendments
1967 National Commission on Product Safety
1968 Natural Gas Pipeline Safety Act
1968 Radiation Health and Safety Act
1969 Fire Research and Safety Act
1969 FTC Quick Freeze Aerosol Spray Products for Frosting Cocktail Glasses Disclosure Rule
1970 Poison Prevention Packaging Act
1970 Occupational Health and Safety Act
1972 Noise Control Act
1972 Consumer Product Safety Act
1972 Youth Camp Safety Investigation Act
1972 Federal Water Pollution Control Amendments
1974 Safe Drinking Water Act
1976 Solid Waste Disposal Act
1976 National Consumer Health Information and Health Promotion Act

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
		1976 Consumer Product Safety Commission Improvements Act 1977 FDA Chlorofluorocarbon Labeling Rule 1977 Toxic Substances Control Act 1978 Home Insulation Safety Act
II. Transportation Safety and Health		
HEW, Commerce, and auto industry to review design changes aimed at increased safety and decreased air pollution	1963 Clean Air Act 1965 Motor Vehicle Air Pollution Control Act 1966 National Traffic and Motor Vehicle Safety Act 1966 National Highway Act 1966 Clean Air Act Amendments 1967 Air Quality Control Act 1969 National Environmental Policy Act 1970 National Highway Traffic Safety Act 1971 NHTSA Occupant Protection in Interior Impact Rule 1974 Emergency Highway Energy Conservation Act 1977 NHTSA Bumper Standard 1977 NHTSA Occupant Crash Protection Rule 1977 NHTSA Passenger Automobile Average Fuel Economy Standards	
FAA to design an improved air traffic control system	1979 NHTSA Tire Identification Rule	
		Additional Transportation Actions: 1970 Traffic and Motor Vehicle Safety Amendments 1971 Federal Boat Safety Act 1972 Motor Vehicle Information and Cost Savings Act 1974 Motor Vehicle and School Bus Safety Amendments 1975 Auto Recall Repair Act
III. Financial and Credit Protection		
SEC investigation of securities industry to serve as basis for later legislation	1970 Securities Investor Protection Act 1970 Investment Company Amendments Act 1970 Investor Protection Amendments to Securities Exchange Act of 1934 1974 Commodity Futures Trading Commission Act	1968 Interstate Land Sales Full Disclosure Act 1979 Interstate Land Sales Full Disclosure Amendments
Truth-in-Lending	1968 Consumer Credit Protection Act 1969 FRB Regulation Z (Truth-in-Lending rules)	1970 Credit Card Act 1970 Fair Credit Reporting Act 1974 Fair Credit Billing Act 1974 Equal Credit Opportunity Act 1975 FRB Regulation B (Equal Credit Opportunity rules) 1976 Equal Credit Opportunity Act Amendments 1976 Federal Deposit Insurance Act 1976 FTC Holder-in-Due-Course Rule 1976 FRB Regulation AA (on formal consumer complaints to FRB) 1977 Fair Debt Collection Practices Act 1978 FRB/FDIC Consumer Fund Transfer Rule (checking account overdraft rules)

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
		1980 Truth-in-Lending Simplification and Reform Act
Stepped-up enforcement of mail fraud statutes	1970 Mail Fraud Act 1971 Postal Reorganization Act (mailing of unordered merchandise) 1977 Mail Fraud Solicitation Act	Additional Financial Protection Actions: 1970 Share Insurance Admendments to the Federal Credit Union Act 1973 FTC Door-to-Door Sales Rule 1974 Real Estate Settlement Procedures Act 1974 HUD Mortgage Loan Disclosure Rule (Real Estate Settlement Procedures Act rules) 1974 Employee Retirement Income Security Act 1975 Federal Credit Union Amendments 1975 Consumer Goods Pricing Act (to eliminate fair trade laws) 1975 FTC Mail Order Rule 1976 Consumer Leasing Act 1976 Real Estate Settlement Procedures Act Amendments 1977 Federal Credit Union Act Amendments 1978 Electronic Fund Transfer Act 1978 National Consumer Cooperative Bank Act 1979 FRB Regulation E (Electronic Fund Transfer rules) 1979 Revised Bankruptcy Code 1980 Depository Institutions Deregulatory and Monetary Control Act
IV. Information and Representation at the Federal Level		
Make current information more available to consumers (e.g., consumer price index, cooperative extension service, etc.)	1970 Executive Order 11566, Consumer Product Information (to disseminate government information of interest to consumers)	1966 Public Information Act 1974 Freedom of Information Act 1976 Government in the Sunshine Act
Council of Economic Advisors to create a Consumer's Advisory Council	1962 President's Consumer Message to Congress (to create Consumer's Advisory Council) 1964 Executive Order 11136, Establishing the President's Committee on Consumer Interests and the Consumer Advisory Council 1967 Executive Order 11349, Amending Executive Order 11136 (administrative amendment) 1971 Executive Order 11583, Office of Consumer Affairs (to replace the President's Committee on Consumer Interests and the Consumer Advisory Council) 1973 Executive Order 11702, Relative to the Executive Office of the President (to transfer Office of Consumer Affairs to HEW; Director retains status of Special Assistant to the President)	

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
Each federal agency to designate a special assistant for consumer affairs	1979 Executive Order 12160 Enhancement and Coordination of Federal Consumer Programs	
Postmaster General to begin a pilot program for the dissemination of consumer information in post offices		
V. Vigilence Against Monopolies		
FTC to be given power to issue cease and desist orders	1973 Trans-Alaska Pipeline Authorization and Federal Trade Commission Improvements Act 1975 Magnuson-Moss Warranty and Federal Trade Commission Improvements Act	
Companies must give notice of mergers in advance to Justice	1974 Anti-Trust Procedures and Penalties Act 1976 Hart-Scott-Rodino Anti-Trust Improvement Act	
VI. Effective Regulation		
Increased funding and staffing for:		
CAB, airline overbooking	1978 CAB Airline Overbooking Rule	1973-1981 CAB Charter Flight Rules 1977 Air Carrier Baggage Liability Rule 1977 Timely Notification of Baggage Loss Rule
FCC, television program selection and promotion of educational television	1962 All-Channel Receiver Act 1967 Public Broadcasting Act	1981 Public Broadcasting Act Amendments (to allow a pilot advertising program on Public Broadcasting Service)
FPC, regulation of utility rates	1978 Public Utilities Regulation Policy Act 1978 Natural Gas Policy Act	
FTC, deceptive trade practices and false advertising	1963 FTC Sleeping Bag Advertising and Labeling Rule 1965 FTC Previously Used Lubricating Oil Advertising and Labeling Rule 1969 FTC Games of Chance Rules 1970 FTC Extension Ladders Advertising and Labeling Rule 1971 FTC Advertising Substantiation Program 1971 FTC Availability of Advertised Specials Rule 1972 FTC Care Labeling of Textile Wearing Apparel Rule 1975 Magnuson-Moss Warranty and Federal Trade Commission Improvements Act 1976 FTC Pre-Sale Written Warranty Rule (Magnuson-Moss Warranty and Federal Trade Commission Improvements Act Rules) 1978 FTC Franchise and Business Opportunities Rule 1978 FTC Advertising of Ophthalmic Goods Rule 1978 FTC Vocational Schools Rule	

Kennedy's Recommendations	Recommendations Acted Upon	Extensions of Recommendations
ICC, household movers	1980 Household Goods Transportation Act	
Truth-in-Packaging	1966 Fair Packaging and Labeling Act	1965 Federal Cigarette Labeling and Advertising Act 1966 Public Health Cigarette Smoking Act 1970 Cigarette Labeling and Advertising Act 1971 FTC Incandescent Lamp Disclosure Rule 1972 FTC Posting of Octane Numbers at Gasoline Pumps Rule 1973 Little Cigar Act 1973 FDA Nutrition Labeling Rule 1978 FDA Vitamin and Mineral Labeling Rule 1979 FDA Patient Package Insert Rule 1980 BATF Mail-Order Alcohol Labeling Rule Other Actions Affecting Regulation: 1980 Regulatory Reform Act 1980 Federal Trade Commission Improvement Act

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List of Table Abbreviations:

BATF	Bureau of Alchohol, Tobacco and Firearms
CAB	Civil Aeronautics Board
Commerce	U.S. Department of Commerce
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FDIC	Federal Deposit Insurance Corporation
FPC	Federal Power Commission
FRB	Federal Reserve Board
FTC	Federal Trade Commission
HEW	U.S. Department of Health, Education and Welfare
HUD	U.S. Department of Housing and Urban Development
ICC	Interstate Commerce Commission
Justice	U.S. Department of Justice
NHTSA	National Highway Transportation Safety Administration
SEC	Securities and Exchange Commission
USDA	U.S. Department of Agriculture

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THE PRE-RETIREMENT PENSION INFORMATION OF MARRIED WOMEN AND IMPLICATIONS FOR CONSUMER EDUCATION

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ABSTRACT

The focus of this paper is to examine the need for consumer education in the area of retirement planning among employed, married women. To do so, the accuracy of pre-retirement pension information is studied. A multivariate analysis of factors determining pension information is employed, adjusting for possible sample selection bias. Results show that women who stand to gain the most through educational efforts are those with lower incomes, and education, no private pension coverage, and children under age 18.

INTRODUCTION

There are basically two research questions which motivate this work. The first involves behavioral assumptions employed by the social scientist, and specifically those made by economists and others studying retirement planning. In this context individuals are typically assumed to make retirement plans based on their perfect, (or at least highly correlated) knowledge of their future pension receipt. If such an hypothesis is valid, one would expect that people near retirement would be able to predict with some accuracy the amount of their benefit upon retirement. If such an assumption is not valid and individuals indeed have little knowledge of pension parameters, the interpretation of results based on such data should be made with great care.

The second question involves a policy question of whether there exists a need for consumer education in the area of retirement planning, and if so, where those efforts should be directed in order to be the most effective.

The focus of this paper will be on the latter question. Specifically, the present study examines perceptions of married women about what their future social security benefits will be given their current circumstances in some base period. Social security benefits are selected for analysis primarily for two reasons. First, data are available and can be used to impute actual benefit amounts for comparison with the respondent's expected benefits. Secondly, social security benefits represent the pension provision that most workers are covered by in the United States.

DATA

The data set employed in this analysis is the Social Security Administration's Longitudinal Retirement History Study (LRHS) matched with summary data on respondent's earnings subject to Social Security taxation since 1937. The sample is a 6 year cohort between the ages of 58-63 during the first interview wave in 1969. The sample was reinterviewed every second year through (including) 1979.

For the present analysis, 1971 is designated the base year as it was the first survey year respondents were asked extensive expectation and asset questions. It is necessary that data for these variables be obtained during the same survey year as expectations in the base period (t_o) are presumably predicated on household asset levels and circumstances in that same period.

SAMPLE

The sample for this analysis consists of married women 59 years of age or older who were employed in 1971[2]. The primary reason such an age range was selected, is that the closer the respondent is in the base period to her planned retirement, the easier it is to compute benefits. It was also necessary to choose women who were currently employed as a subsequent objective of this work was to examine actual retirement behavior. About 34 percent of all married women in this sample were employed, so of course, inferences drawn are limited to this population.

COMPARISON OF ACTUAL VERSUS EXPECTED SOCIAL SECURITY BENEFITS

The comparison between actual and expected social security benefits may be made in a number of ways. However, this research focuses on the comparison of respondents expected pension amount in period t and what we impute they are entitled to given their past earnings history and expected future work patterns in period t. By examining this relationship we are able to abstract from future unforeseen events and focus only on differences attributable to imperfections in information. Expectations of retirement benefits are taken directly from the 1971 survey. In order to impute actual benefits, 1971 program rules are utilized assuming that is the information women had available to them in the same year. It is assumed that pension benefit acceptance and retirement occur concurrently. Thus, earnings are imputed for the time period between 1971 and the respondents' planned retirement date in order to obtain an estimate of their Average Monthly Earnings.[3] It was at this stage in the analysis where restriction of the sample to women 59 years of age or older was most useful. These women were closer to their expected retirement date, than the unrestricted sample and thus fewer future earnings years had to be estimated for them. The benefit imputation thus represents how much one should expect given existing program rules and recipient characteristics.[4]

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[1] Assistant Professor of Family Economics. Although many people have provided useful comments throughout the course of this study, special thanks are due Jennifer Gerner, Olivia Mitchell, Ronald Ehrenberg, Keith Bryant, Kamona Heck, and Cathleen Zick. Of course, final responsibility for any remaining errors is that of the author.

[2] Since husbands were considered primary respondents, their age range was 60-65 in 1971. However, there were no restrictions with respect to wife's age and thus they range, in this sample, from 59-71.

In order to make a preliminary assessment of the need for consumer education in the area of retirement planning i.e., to examine the accuracy of pension benefit information, a calculation of the simple correlation between actual and imputed annual benefits is made. This initial investigation reveals a remarkably low correlation (.13) and indicates the need for not only a closer, ceteris paribus, look at the data, but also identification of parameters which explain the information imperfections.

THEORETICAL MODEL OF PENSION INFORMATION ACCRUAL

It is hypothesized that information gathering will explain discrepancies between actual (imputed) social security benefits and expected benefit amounts i.e., pension information accuracy. Assuming that households engage in three uses of their time, market work, home work, and information gathering, it is possible to examine not only how time is allocated to search but to identify the opportunity costs of search. The probability one will seek pension information is a function of both

1) expected future benefit amounts, and
2) the cost of obtaining information.

Specifically, the higher the present discounted value of benefits one expects, the more likely one is to engage in information, assuming information is a normal good. Directly, the cost of obtaining pension information is a function of the value of marginal productivity in the home and market wage rate, as each of these represent the opportunity cost of engaging in the information search process. In equilibrium, individuals will equate on the margin their market wage, shadow wage, and marginal search costs. However, not only are there time costs associated with information accrual, there are also other direct and indirect factors which affect the cost of information accrual. Other factors include those information sources which are relatively less expensive to explore and whose access will induce more information being sought, ceteris paribus.

Generally, the probabilty one engages in search (Pr(s))

$$Pr(S) = s((E(B)(1+r)^{-t}),\ T_s e) \qquad (1)$$

is a function of the expected present discounted value of future benefits $(E(B)(1+r)^{-t})$ and information accrual costs $(T_s e)$. Further assume that the more information acquired (holding the per hour quality of information constant) the more accurate will be one's pension estimate. In this research it is therefore hypothesized that the difference between respondents' expected benefit amount and their actual benefit entitlement can be explained by a set of variables which affect both the costs of information accrual and the expected benefit amount.

MODEL

In order to investigate the differential between expected and actual pension amounts, a multivariate analysis is carried out to examine factors hypothesized to affect the probability one engages in information gathering. According to the model developed previously, the parameterization of information gathering should include not only direct measures of costs and benefits (such as direct search costs and expected benefit amounts) but also measures of variables which might indirectly affect these costs and benefits. Such indirect factors are particularly important on the cost side, since different women may face different constraints or have different advantages. For example, women whose husbands currently receive social security benefits have access to pension information (via their spouse) at a lower marginal cost than would women whose husbands are not currently receiving benefits. Thus, variables hypothesized to affect pension information can be classified as either directly or indirectly affecting the costs or expected benefit associated with pension information gathering. Pension information for this part of the analysis is measured as the absolute value of the difference between respondent's expected annual benefit amount $(\hat{Y})$, and to what in fact she is annually entitled (Y_a). In 1971 wives were asked how much they expected to receive from social security upon retirement. Their response constitutes, $\hat{Y}$, one component of the dependent variable. From this is then netted their actual imputed benefit (Y_a) which serves as the benchmark for comparison with the expected amount.

For simplicity a linear relationship between the dependent and explanatory variables is assumed leading to the following estimating equation

$$|\hat{Y} - Y_a| = \beta_0 + \beta_1 Y_a + \sum_{i=2}^{n} \beta_i P_i + \mu \qquad (2)$$

where

P_i = remaining search parameters

What follows is a description and justification for inclusion of the remaining P_i search parameters reported in this article. These variables represent combinations of both continuous and dummy variables of family characteristics hypothesized to affect either costs or expected benefits associated with information gathering and thus information accuracy. The discussion of predicted relationships between the X's and $|\hat{Y} - Y_a|$ is cast in terms of whether exhibition of trait X: results in better (thus narrowing the gap), or poorer (thus widening the gap) benefit information. For instance, if one expects that persons who exhibit trait X: are likely to have accrued more information, the predicted sign on the coefficient X: should be negative, implying a "closing"of the gap between actual and expected benefit values.

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[3] A special thanks is due Olivia Mitchell for helping develop the algorithm used in this analysis and sharing similar work in progress by her and Gary Fields. Of course final responsibility for accuracy remains that of the author.

[4] Exact specification of the benefit algorithm is available from the author on request.

Wife's current age is expected to related positively with accuracy of benefit expectations, because as women near retirement age they will be more likely to seek out information with respect to benefit levels. Age may also capture the effects of information obtained from peers who are in the process of retiring, an information source obtained at a relatively lower marginal cost. Further, the older one gets, the more certain are work patterns from which benefit expectations are formulated. This is important not only to the accuracy of respondent's expectations, but how accurately Y_a is calculated. The probability of measurement error in benefit imputation will be reduced as current age increases, ceteris paribus.

Husband's age in 1971 is hypothesized to be positively related to accuracy of pension estimates. Older husbands are more likely to have gained pension information with their wives. Further, the older a woman's husband, the greater the probability of his death, an event which usually results in a considerable loss in household human and non-human resources. The greater the likelihood of husband's death, the more likely women would be to begin information gathering in order to minimize the impact of that loss.

Assuming that households pool not only income but information, all family member's experiences with institutional transfer systems will be shared with one another and thus decrease their marginal cost to search. Therefore a woman will not only gain information about her own social security benefit by her prior experiences but will also benefit by experiences of her husband. Such sharing is expected to enhance one's information with respect to future benefit amounts and their effects will be captured by two dummy variables. The first takes the value of 1 (one) if husband currently receives social security and the second takes the value of 1 (one) if wife expects to receive other (non-social security) pension beneifits.

The effect of education may be twofold. First, it has been shown that education improves not only productivity in the market, but also improves productivity in the home as well (11, p.17). One essential input to home production is management of resources. Thus, if one's managerial capabilities are enhanced by education, the family management literature suggests that by definition one's planning and implementing skills will improve (3, p.53). Applying these principles then to pension expectations, one would predict that women with higher eduction would be more adept at assimilating information and would know with greater accuracy what in fact their pension benefits will be.
Secondly, given the intricacies of social security program rules, greater education may enable one to better understand how benefits are formulated; both effects which could potentially reduce the time cost associated with information gathering.

Household income is defined as the sum of all sources of income received by the family in the last year. It includes wages, husband's pensions (if any), and other cash transfers. Given wife's wages are included in this measure, implying the existence of both an income and substitution effect, it is not possible to make an a priori sign prediction on the effect.

The predicted effect of children under 18 in the household is ambiguous. The presence of children increases the likelihood the household benefit entitlement will be greater since dependent children receive ½ of either their mother's or father's benefit, whichever is greater. Further, since in 1971 such a benefit continued to be paid to children who attend college (until age 23) the potential increased expected benefit amount may be substantial. On the other hand, the cost of engaging in search increases as child care expenditures must be considered. Further, theoretically child care costs should also be netted from the measure of wife's market wage rate, but were not as no such measure was available. Assuming child care costs are variable costs associated with market work, incurring these costs would result in one engaging in more search as substitution out of work time and into search is relatively less expensive.

In the time use scenario, where individuals engage in household production, market work and search, it was established that in equilibrium a woman would equate her shadow wage, market wage and marginal gain in utility from search. Families with children however, may incur additional expenses while engaging in search as child care services must be purchased. Such expenses may be incurred for services ranging from baby sitting of the prepubescent to chauffering of a young teen to a sport or other social activity. As such the likelihood of engaging in pension search would be diminished, ceteris paribus, and less time would be spent engaging in search. Recalling then Equation (1) which implies that the probability of engaging in search is a function of both expected pension amount and search costs, two effects are observed. First, current search costs increase with the presence of dependents thus inducing women to gather less pension information while simultaneously expected benefit amounts are increasing inducing women to gather more information. The net effect will depend then on the relative weight of each effect.

PROCEDURES

When wives were asked how much they expected to receive from social security in the form of retirement benefits they reported either a specific annual amount, zero (they expected to receive no benefits), no response, or don't know. Analysis of 1971 information reveals that among married working women in this sample about 38 percent were able to provide some non-zero expected amount, 23 percent expected to receive no benefits, 38 percent didn't know whether they would receive benefits, and fewer than 1 percent refused to answer.

The fact that some women responded that they didn't know how much their benefit would be is cause for some concern when estimating the proposed model. Sample selection bias may be introduced if there are characteristics which determine both whether women know their benefit, and what they report the size of their benefit to be. Use of such a censored sample to estimate effects of various variables on the accuracy of benefits will yield biased estimates of their effects for the population as a whole. Therefore, a sample selection procedure proposed by James Heckman (1979) is utilized. In this instance a probit equation is run where the dependent variable is a dummy variable set equal to one if the respondent was able to offer some benefit estimate, zero being a legitimate response (zero otherwise) and regressed on a set of independent variables hypothesized to affect the probability one had any pension information. From these estimates a correction factor " λ", the inverse of Mill's ratio, is derived and entered as a regressor in the final estimating equation on the subsample of those providing benefit estimates.

RESULTS

Of the 215 usable observations, 61 percent of the respondents were able to make an estimate (including zero) of their expected soical security benefits amount. The model results reported in both Tables 1 and 2 are only those variables that produced the best fit in each equation.[5] Variables found to be most significant in the probit equation (Table 1) are wife's and husband's ages.[6] Each are found to be positively related to the probability of a respondent being able to provide some estimate of future benefits. The estimated signs are both as expected and suggest that older spouses are more likely to have access, at a lower marginal cost, to pension information.

The variable with the largest (although insignificant) effect is husband currently receiving Social Security. If her husband is currently receiving social security benefits, the wife is nearly 20 percent more likely to offer some estimate of future benefit amounts. It happens that none of the women for whom the dependent variable equaled zero are married to men currently receiving social security benefits, which accounts for the unusually high marginal effect. The remaining variables were found to be insignificant with relatively small marginal effects.

TABLE 1. Probit Results--Dependent Variable Equals 1 if Respondent made an Estimate of Future Benefits; 0 otherwise.

Variable	Coefficient	Marginal Effect
Intercept	-16.46**** (3.92)	---
Wife's Age	0.94** E-01 (0.42) E-01	.0357
Husband's Age	0.17**** (0.54) E-01	.0630
Wife's Education	0.35 E-01 (0.29) E-01	.0133
Household Income	0.12 E-04 (0.15) E-04	.0466
Husband Currently Receiving Social Security	0.53 (0.45)	.2012

n = 215
Log Likelihood = -132.2
X^2 = 22.73
d.f. = 5

**Significant at the 5 percent level
****Significant at the ½ percent level

Mean of dependent variable = 0.60

TABLE 2. Regression Results--Expected Social Security Benefits Corrected for Selectivity Bias--Dependent Variable Equals the Absolute Difference Between Actual and Expected Benefit Amounts.

Variable	Coefficient[a]
Intercept	-140.22 (336.99)
Imputed Benefits	0.57**** (0.83 E-01)
Wife's Education	21.75 (19.41)
Household Income	-0.13 E-01* (0.76 E-02)
Wife Expects to Receive Other Pension	-483.62**** (148.78)
Number of Children ≤ 18	501.71*** (205.75)
Lambda	112.08 (214.97)

n = 130
F = 13.49****
R^2= .36

*Significant at the 10 percent level
***Significant at the 1 percent level
****Significant at the ½ percent level

[a] Asymptotic standard error in parentheses

Focusing attention now to corrected estimates reported in Table 2 for the sample of married women who have benefit estimates we find these women anticipated receiving only about 54 percent of their entitled benefit, as measured by comparing the average expected benefit to the average actual benefit. When actual benefit entitlement increased by one dollar, women's expectations only changed by $.57. The variable which explains the most variance in the expected social security benefit equation (in terms of explained sums of squares) is whether the wife expects to receive other pension benefits. Women who anticipate other pensions perceive that their social security benefit will be higher, a fact that given on average, women underestimate their benefits makes them better predictors. For example, these results predict that an average woman who does not expect to receive a private pension, reports an annual actual-expected gap of $876. However, women who expect a private pension report a gap of only $393 between their actual and expected social security benefits, ceteris paribus. One reason such an effect is observed may in part be due to employers who provide retirement planning workshops for employees. In such sessions, company pension provisions and how they relate to other forms of investment (e.g., social security and private savings) are explored. Some sessions are even offered during regular working hours implying a negative search cost.

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[5] The list of other variables which were considered include number of years before both husband's and wife's planned retirement, wife's hourly wage, family assets, receipt by the household of some private pension or transfer income, family health status, and wife's "dependency" status (labor force attachment).

[6] Formulas for calculation of marginal effects for both continuous and discrete variables from estimated coefficients are available upon request.

Other statistically significant variables include imputed soical security benefits, household income, and the nuber of children under the age of 18. Consistent with the hypothesis that information is a normal good, a positive coefficient on household income is found. Specifically, an increase of $1,000 in family income will result in a "closing" of the information gap by $13.

The negative estimated coefficients on number of children indicates that the presence of dependents results in one being likely to have poorer pension information. Strictly, it implies that the effect of search costs must outweigh the effects of both higher expected benefits and lower real wages. However, since findings indicate that many women have poor or no benefit information it may be the case that women either

1. do not realize their children may be entitled to dependents benefits, or
2. underestimate substantially the additional benefit amount,

such that increased current costs associated with children and information gathering appear to diminish the likelihood that information is sought. Further, a family with young children may have a systematically different rate of time preference than families without young children. For example, future consumption may be discounted at a substantially higher rate by families with younger children while the rate of time preference for families without younger children may not vary over time.

SUMMARY OF FINDINGS

In this sample, 40 percent of married employed women have no information about their social security benefits by age 61. While average annual computed benefits are $1,603, women's expectations on average are low--only $866 per year. Empirical results indicate that the wife's probability of being able to estimate her retirement benefit is primarily a function of her own and her husband's age. Such a finding indicates that family and peer information represent a relatively inexpensive source of informatin available to the woman.

The variable found most significant in determining the "accuracy" of wive's pension information, is whether she expects a private pension. Again, this is a variable which may represent the cheapest form of pension information available. Information is found to be a normal good as its acquisition is positively related to household income. Presence of children under age 18 results in poorer information with the additional costs to search due to presence of children, outweighing the expected discounted future returns to potential higher benefit levels, a result which may merely be reflecting further inadequate pension information with respect to dependents' allowances.

DISCUSSION

Returning full circle to the initially stated questions of interest, first: do working, married women have a need for consumer information in the area of retirement planning?--the answer must be an unequivocal, yes. Approximately 38 percent of the sample simply had no idea of how much their pension might be.[7] Further study reveals only 21 percent of women were able to provide estimates of their pension within plus or minus 25 percent of the imputed amount. Again, it bears repeating, that the average woman's age in this sample is 61, a group one would expect to have begun considering their retirement options.

With respect to the second half of the research question: where should educational efforts be directed?--these results have several interesting implications. Firstly, at age 61 women were significantly less likely to have any pension benefit information than women just one year older. This is explained in part by the fact that social security benefit entitlement occurs for most (if fully insured) at age 62. Before age 62 either the cost of obtaining information is prohibitive, or future benefits are discounted so heavily that no information is prohibitive, or future benefits are discounted so heavily that no information is sought. In either case, this is the group whose marginal benefit from any education effort would likely be the greatest. Results also indicate that employed, married women with any or all of the following characteristics

- children 18 years or younger at home
- low household income, and
- those who are not eligible for any private pension benefits

would be benefited by educational efforts. Certainly, financial planning for retirement before age 61 would be a worthy goal, since at that point in time there are but a few ways one can, in any meaningul manner, change the composition of her portfolio. However, these findings indicate that efforts which reach such a group will by no means be for naught, but rather would provide useful and needed information for an informed retirement choice.

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[7] As a point of general interest 44% of all married men and 33% of all single women in the 1971 survey were also unable to provide any estimate of their expected benefit amount.

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TAX CREDITS AS A FINANCIAL INCENTIVE IN HOME ENERGY MANAGEMENT

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ABSTRACT

Research results prior to this study had indicated that financial incentives in the form of tax credits were believed to be the most favored motivational force for encouraging the adoption of energy-saving measures. Findings from this study have indicated that tax credits may not be as strong an influencing variable as originally believed.

The primary concern of energy policy research since the mid-1970's has been to examine what motivates home energy management (1,2,3,4,5,9,14). Motivational techniques have been classified into three categories: 1) Behavior regulation--establishes speed limits on highways, requires thermostat settings in buildings, 2) Economic restrictions--price increases and added taxes on energy consumption products and services, and 3) Financial incentives--tax credits and government guaranteed loans (8,20). Financial incentive techniques are considered as providing the greatest motivation (13,17,22). Furthermore, tax credits are believed to be the most effective incentive for residential conservation (11,15).

Belief in the motivational force of tax credits may have encouraged the U. S. Congress's enactment of Residential Energy Conservation Tax Credit Act of 1978. The Act was intended to provide individual homeowners and renters with federal tax credits when investments in energy conservation products were made. Over eighty percent of the individual states provide additional tax credits and deductions in various forms.

Presently, the cost benefits of tax incentives are being questioned (16,18,21). The use of tax credits as energy investment incentives depends upon the homeowners' and renters' awareness of available tax credits (7,19). Furthermore, other factors, such as having knowledge about what would be the most appropriate energy saving features to add to a house, may play a more significant role in the selection of energy-saving feature than whether it qualifies for tax credits (6,12,19).

PURPOSE

The purpose of this paper was to examine the role of tax credits as a motivational force in the adoption of energy-saving measures among Arizona households. This was accomplished by: 1) determining if the households were aware of energy tax credits, 2) identifying what energy-saving measures households were using, and 3) determining if those energy-saving measures used were qualifiable for tax credits.

METHODOLOGY

Results in this study are based on 851 mail questionnaires returned by adult members of Arizona households during the spring of 1981. Households were selected from 1981 telephone directories using a multi-stage probability cluster sample based on current rural and urban population densities. Multiple mailout procedures were employed following the Total Design Method (10). The response rate was 63%, yielding 666 homeowners and 185 renters.

The nineteen energy saving measures and features used for this study were selected for their tax credit qualifications, range of financial cost and ease of application. The respondents were given two sets of questions. The first set of questions involved seven energy saving measures which required a change in the household's normal living routine or arrangement of living space. These measures did not qualify for tax credits. The second set of questions contained fourteen energy saving features that might be added to a residence. The respondent was asked if the various features existed when they moved in, had been added since moving in, if there were plans to add any of the features during the next two years, or if they had no plans to add during the next two years. The respondent could also indicate if the feature was not applicable to their residence or if they did not know if the feature existed.

RESULTS AND DISCUSSION

Tax Credit Awareness

The respondents' awareness of federal and state tax credits was determined by asking respondents if they were aware of federal and/or state tax credits. Awareness of federal tax credits was indicated by 70.8% of all respondents while only 66.7% were aware of state tax credits. When asked about making claims for tax credits, less than one-sixth of the respondents had claimed any credits for 1978, 1979 or 1980. Although Arizona offers tax credits for the purchase and installation of energy saving features, 2.3% of the respondents stated that there were no state credits available.

Energy Saving Measures

The seven energy management activities which do not qualify for tax credits and cost less than $15.00 to implement or have no financial cost are given in Table 1. Five out of the seven measures have been adopted by 47.4% to 76.4% of the respondents. The two measures least likely to be adopted were changing room use to utilize sun-warmed and shaded areas and to have energy audits conducted. Of the seven, changing room use may be the most difficult to implement given existing housing structures and building orientation. Energy audits were not generally available in Arizona at the time of the survey except on a pilot study basis by one utility company; therefore, Arizona residents have had little opportunity to have energy audits conducted.

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[1] Assistant Professors of Consumer Studies. Data for this paper were collected under the auspices of Western Region Project W-159, "Consequences of Energy Conservation Policies for Western Region Households".

Table 1. Disposition of Non-Tax Credit Home Energy Saving Measures

	N = 851 Percentage Distribution			
	Do Now	Plan To Do In 2 Years	Don't Plan To Do	NA or DNK[1]
ENERGY-SAVING MEASURES				
1. Use window coverings to utilize sun and shade	76.5	2.5	10.2	10.8
2. Set hot-water heater to 120°F (or less)	66.1	9.6	18.8	5.5
3. Set thermometer to 78°F in summer	56.8	7.9	17.7	17.6
4. Close some rooms	56.1	3.8	23.7	16.4
5. Set thermometer to 65°F in winter	47.4	7.9	37.7	7.0
6. Change room use to utilize sun and shade	35.5	4.1	36.1	24.3
7. Conduct home energy audit	8.5	13.6	63.6	14.3

[1] Not applicable to home, or do not know.

Energy Saving Features

The fourteen energy saving features that qualify for federal and/or state tax credits are given in Table 2. Except for ceiling and wall insulation and evaporative coolers, the remaining energy saving features existed in less than one-fourth of the housing structures when the respondent moved into the residence. Weatherstripping, the lowest monetary cost action of those eligible for any tax credits, had the highest adoption rate after the respondents moved into the housing structure. However, weatherstripping qualifies only for federal tax credits and not for Arizona state tax credits. Of the five energy saving features added by more than 10% of the respondents, three are particularly suited to desert regions. These are evaporative coolers, outdoor window shading and insulated window coverings.

Table 2. Disposition of Tax Credit Home Energy-Saving Measures.

	n = 851 Percentage Distribution				
	Existed When Moved In	Added Since Moved In	Plan To Do In 2 Years	No Plans To Do	NA DNK[1]
ENERGY-SAVING MEASURES					
1. Weatherstripping & caulking on most doors & windows ***	3.5	25.6	14.3	16.1	10.5
2. More than 4 inches of ceiling insulation *	41.2	17.8	7.7	12.4	20.9
3. Insulation in exterior walls *	41.9	8.0	3.9	21.1	25.0
4. Evaporative cooler**	30.3	13.5	9.4	31.2	15.5
5. Outdoor window shades **	10.4	17.7	10.8	45.3	15.8
6. Thick floor insulation *	23.3	4.3	3.0	28.9	40.5
7. Insulated window coverings *	7.1	17.4	7.8	51.7	16.0
8. Double panes or storms on most windows ***	13.7	6.9	11.1	48.2	20.0
9. Clock setback thermostats ***	9.6	3.6	6.5	58.9	51.5
10. Storm doors on all entrances ***	6.1	6.3	10.9	52.2	24.5
11. Solar hot-water heater *	1.2	3.2	20.3	50.2	25.0
12. Solar heating *	0.7	1.0	10.9	60.0	27.5

* Eligible for Federal and Arizona tax credit

** Eligible for Arizona tax credit only

*** Eligible for Federal tax credit only

[1] Not applicable to home, or do not know.

Results in Tables 1 and 2 indicate that Arizona households tended to use energy saving measures and features which have low or no financial costs, although tax credits were available for the higher cost items such as solar devices and storm windows. Furthermore, the examination of the column "Plan to do in 2 years" in Table 2 suggested that the possible adoption of the more costly energy saving measures during 1981 and 1982 would be limited.

DEMOGRAPHIC INFLUENCE

A chi-square test was used to examine relationships between the demographic characteristics of respondents and the 19 energy saving measures and features.[2] These characteristics included respondents' sex, age, educational level, income, type of employment, and age of the housing unit. Two variables had a consistent relationship with the use of energy saving measures and features at the .01 level of significance. These were the age of the respondent and the age of the dwelling.

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[2] When examining for demographic influences upon energy saving measures and features adopted and used, only the 666 homeowners were examined. It was expected that renters frequently are unable and unwilling to purchase and install high cost energy saving features such as insulation, double pane windows and solar devices. Furthermore, the renters probably would not know if the landlord took the energy saving action for tax purposes or not.

Age of Respondents

Age of the respondents was significantly related to all the non-tax energy saving measures except using window coverings to utilize sun and shade. Older respondents were more likely to close off rooms and set back water heaters to 120°F, while younger respondents were more likely to set thermostats to 68° in the winter and 78° in the summer. The younger respondents were also more likely to plan to alter room usage to utilize sun and shade. When considering energy audits, those who had audits done or planned to have them done were in the 34 to 55 age group.

The respondent's age was significantly related to nine of the fourteen tax credit energy saving features. Seven of these features are given in Table 3. Weatherstripping, exterior wall and floor insulation, and outside window coverings already existed or had been added in the housing units of the older respondents. Younger respondents tended not to have these features nor did they have plans to add them. Few solar hot waters existed or had been added. Those who had plans to add the solar hot water heaters were between the ages of 35 and 54. The 35 to 54 year old respondents represented those who would most likely add clock setback thermostats. Although wood burning stoves and glass doors on fireplaces were highly significant, .0000 and .0012 respectively, they were applicable to less than 50% of the housing units, and the plans did not exist for their installation.

Table 3. Chi-Square Relationships of Energy Saving Features Eligible for Tax Credits by Respondents' Age.

	% of Respondents by Age			Significance
Feature	<34	35-54	55+	
Weatherstripping n = 629				
Existed or added	13.2	25.3	28.6	
Plan to add	4.5	4.9	6.2	
Don't plan to add	1.3	3.0	4.6	
Did not know or Not Applicable	1.1	1.3	5.6	.0335
Insulated Exterior Walls n = 628				
Existed or added	10.1	20.9	27.1	
Plan to add	1.0	1.9	.6	
Don't plan to add	3.7	7.6	8.1	
Did not know or Not Applicable	5.4	4.6	9.1	.0114
Floor Insulation n = 626				
Existed or added	4.5	9.8	17.6	
Plan to add	1.1	1.3	1.0	
Don't plan to add	6.2	9.3	11.8	
Did not know or Not Applicable	8.1	14.5	14.7	.0040
Outdoor Window Shades n = 614				
Existed or added	5.4	11.7	15.7	
Plan to add	4.2	4.7	3.3	
Don't plan to add	7.8	14.5	18.6	
Did not know or Not Applicable	3.0	4.4	6.8	.0026
Clock Setback Thermostats n = 626				
Existed or added	2.2	4.2	7.5	
Plan to add	2.6	3.5	1.6	
Don't plan to add	10.7	19.8	26.8	
Did not know or Not Applicable	4.4	7.6	8.9	.0002
Solar Hot Water Heaters n = 624				
Existed or added	.8	1.9	2.4	
Plan to add	6.9	10.6	6.7	
Don't plan to add	7.7	15.2	25.0	
Did not know or Not Applicable	4.5	7.0	11.3	.0001
Solar Heating n = 618				
Existed or added	.6	.5	.8	
Plan to add	3.9	5.5	3.2	
Don't plan to add	10.5	22.0	27.8	
Did not know or Not Applicable	5.0	7.3	12.7	.0033

Age of the Dwelling

The age of the dwelling was significant for five of the tax credit energy saving features. See Table 4. Overall, the newer the dwelling, the more likely that weatherstripping, storm windows and all three types of insulation had existed before the respondents had actually moved in. Less than 9% of the respondents had actually added the weatherstripping, storm windows or insulation. If it had been added, it was more likely to have been added by respondents living in dwellings built from 1950 thru 1969. This group was also more likely to have plans to add wall insulation in the next two years.

The age of the dwelling was not significant for any of the energy saving measures that required changes in lifestyle or rearrangement of living space.

It should be noted that Arizona housing patterns differ from that in the rest of the United States. Most Arizona housing, 72.4%, has been built after 1960. Respondents 65 years and older were as likely to be living in homes built since 1974 as were younger respondents 25 to 50 years old. Respondents who were in the 50 to 65 year old group were more evenly distributed in housing built after 1950.

Table 4. Chi-Square Relationships of Energy Saving Features Eligible for Tax Credits by Age of Dwelling.

	% of Dwellings by Age			
Feature	Prior 1950	1950 1969	1970 1981	Significance
Storm Windows n = 639				
Existed or added	2.1	3.8	17.9	
Plan to add	1.3	4.1	7.4	
No plans to add	5.6	19.5	21.7	
Did not know or Not applicable	2.1	6.9	8.9	.0000
Weatherstripping n = 659				
Existed or added	5.4	21.4	40.1	
Plan to add	2.9	7.0	8.0	
No plans to add	1.5	3.4	3.9	
Did not know or Not applicable	1.6	2.7	[illegible]	.0000
Ceiling Insulation n = 655				
Existed or added	6.9	23.6	39.2	
Plan to add	1.1	3.5	3.6	
No plans to add	1.8	4.0	3.4	
Did not know or Not applicable	1.7	2.8	8.4	.0000
Insulated Exterior Wall n = 654				
Existed or added	5.5	14.9	37.2	
Plan to add	0.4	2.2	1.1	
No plans to add	2.9	9.6	6.8	
Did not know or Not applicable	2.8	7.2	9.3	.0000
Floor Insulation n = 650				
Existed or added	2.6	7.3	22.0	
Plan to add	0.4	1.0	2.0	
No plans to add	4.8	12.0	10.6	
Did not know or Not applicable	3.6	13.9	19.9	.0000

CONCLUSIONS AND IMPLICATIONS

Research results prior to this study had indicated that financial incentives in the form of tax credits were believed to be the most favored motivational force for encouraging the adoption of energy saving features. Findings from this study have indicated that tax credits may not be as strong an influencing variable as originally believed.

The respondents who have taken steps to reduce energy consumption since tax credits became available selected activities which usually did not qualify for federal and state tax credits. Furthermore, the results indicated that most respondents who had not adopted those energy saving features which qualified for tax credits exhibited little intention of doing so in the future. These results weaken the idea that tax credits serve as a strong motivational force, expecially since 70.8% of the respondents were aware that tax credits were available.

A closer look at the activities which have been adopted may indicate that the interruption of the household unit for even a short period of time to install energy saving features is not acceptable to many persons. The kind of information available regarding the amount of financial investment and risk involved when employing some energy saving features may also be a more powerful motivating factor than tax credits. This implication has still to be studied.

The outcome of this study indicated that tax credits may need to be reexamined and restructured if they are to continue to be used as a motivational force to encourage the adoption of energy saving features. If most people who are going to adopt energy saving features already have done so, and a large number of those who have not state that they may not, then the cost of offering a tax credit to the few late adopters may not be advisable. Considerations may be given to reducing or eliminating tax credits for less expensive items such as caulking and weatherstripping and increase those credits given for more expensive features such as solar water heaters and wall insulation.

The results indicated that the age of the house and the age of the occupants were factors in the adoption of energy-saving features and measures. This also indicated that older homes and older persons have already taken action to conserve energy and that future programs offering tax credits may need to be directed to specific target groups. More educational material may need to be developed to reach other specific target groups to encourage the adoption of the more costly energy saving features.

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OHIO EMPLOYMENT OPPORTUNITIES FOR CONSUMER SERVICE GRADUATES

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ABSTRACT

The purposes of this study were to identify Ohio organizations which do or would employ consumer service personnel and the professional and personal qualifications required or desired. Respondents stressed the importance of business, consumer economics, communications knowledge, and ability to work with people. The study also identified job responsibilities, titles, and entry level positions.

The consumer service major in the Department of Home Economics and Consumer Sciences at Miami University is an interdisciplinary program. Students take courses in business, communications, political sciences and social sciences as well as in home economics.

Individuals seek higher education for a variety of reasons. A major reason is to obtain the educational background required to enter a specific occupation or profession. A profession assumes responsibility for adequate preparation of its members [3]. Adequate preparation should include a program of study which is relevant to the current market situation and the specific positions which graduates hope to obtain. Studies of the effectiveness of education in relation to job responsibilities can help educators evaluate curricula [5].

The assessment of curriculum quality can take several forms. Conducting follow-up studies of graduates is one way to keep programs current with career needs of students [2]. This technique is necessarily limited to the past and current experiences of a limited number of graduates as perceived by the graduates themselves. This technique does not tap potential sources of employment nor does it provide the full range of information needed for curriculum review.

Another technique used in curriculum evaluation is to conduct studies of career opportunities for graduates by surveying current and prospective employers of the graduates. Studies by Burton [1] and Ristau [6] supported the need for consumer affairs professionals in business and suggested the use of interdisciplinary preparation programs. Ristau [6] relied heavily on information from firms which employed members of the Society of Consumer Affairs Professionals (SOCAP) but recommended that further information was needed from non-SOCAP firms.

Consumer affairs professionals are employed in a wide variety of positions in addition to traditional home economics business positions such as communication and journalism, extension education and in consumer protection and family services. Responses from government and business led Burton [1] to recommend that students desiring a career in consumer affairs should major in business, emphasize communications, and try for some field work in the consumer area during their undergraduate years. Study of the employment practices and needs of government agencies and organizations was recommended by Ristau [6].

The need for current comprehensive information about the employment of consumer affairs professionals is evident. Studies by Burton and Bowers [2] and Ristau [6] confirmed this need. A comprehensive study of Ohio employment opportunities for consumer affairs graduates is one step in meeting this need and assuring undergraduates a professionally relevant education.

PROCEDURE

Population and Sample Selection

The population for this study was companies which market consumer products and/or services throughout the state of Ohio (existing and prospective employers of consumer service graduates). From this population a sample of 255 companies and agencies was chosen to provide geographic and organizational diversity using various consumer, agency, and business directories. Organizations included those which (a) develop and market consumer products and/or services, such as food companies, household equipment manufacturers, utility companies, and banks (213 companies) and (b) assist consumers in understanding and interpreting information and legislation, such as government consumer protection agencies and the mass media (42 agencies and companies). Each of these organizations employed 25 or more persons. The sample was restricted to Ohio due to funding limitations.

Research Design

Data collection. Data was gathered by means of a mail questionnaire sent in the Spring of 1982. The questionnaire was modeled after the one used in the Ristau study [6]. A cover letter explaining the purpose of the study, a questionnaire, a consumer service curriculum guide, and a metered self-addressed envelope were sent to each of the participants. A follow-up mailing was sent to non-respondents to increase the participation rate. A final response rate of 36 percent (93 respondents) was achieved in the study.

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[1] Assistant Professors of Home Economics and Consumer Sciences

Coding and analysis. The Statistical Package for Social Sciences (SPSS) was used to facilitate data analysis. Frequencies, percentages and means were computed for use in the analysis of the data.

RESULTS AND DISCUSSION

Ninety-three of the 255 organizations surveyed responded to the questionnaire (36%). The preliminary questions asked respondents if they do or would hire consumer service personnel. If respondents answered "no" to these questions, they did not finish the questionnaire. Therefore, the decision was made to not include those questionnaires in which the respondent had answered only the preliminary questions. As a result, 19 percent (48) of the questionnaires were used in the analysis.

Six types of organizations supplied the majority of responses. Half of the 48 organizations were food related (11), utility companies (7) or state agencies (6) (Table 1). Insurance companies, home equipment organizations and banks accounted for an additional one-fourth of the respondents. Other respondents included grocery and restaurant chains, retail department stores, toiletry producers, newspapers, and TV stations.

TABLE 1. Types of Organizations Responding and in Subset.

Type of Organization	Total Respondents		Respondents In Subset	
	No.	%	No.	%
Food Related	17	18.3	11	22.9
Insurance	12	12.9	4	8.3
Equipment	10	10.8	4	8.3
Utility Company	9	9.7	7	14.6
State Agency	9	9.7	6	12.5
Banks	7	7.5	4	8.3
Retail Dept. Store	5	5.4	2	4.2
Grocery Chain	4	4.3	3	6.3
Restaurant Chain	4	4.3	2	4.2
Newspaper	4	4.3	1	2.1
Toiletry Producer	3	3.2	2	4.2
Radio/TV	3	3.2	1	2.1
Miscellaneous	6	6.4	1	2.1
Total	93	100.0	48	100.0

Most of the respondents were either headquarters (33%) or branch offices (29%) (Table 2). Nine more (19%) were subsidiaries. These three structures of organizations accounted for four-fifths of the usable responses.

Most (68%) of the 48 responding companies and agencies currently hire persons with a consumer affairs background and another 10 (21%) would consider doing so. Among those who have such employees, most have fewer than five.

TABLE 2. Structure of Organizations Responding and in Subset.

Structure of Organization	Total Respondents		Respondents In Subset	
	No.	%	No.	%
Independent	10	10.8	2	4.2
Subsidiary	25	26.9	9	18.8
Headquarters	25	26.9	16	33.3
Branch	20	21.5	14	29.2
Other	10	10.8	7	14.6
Missing	3	3.2	0	-
Total	93	100.0	48	100.0

The question, "To what extent would study within the following areas be important?" was divided into four subject matter areas. These were home economics, business, mass communications, and political science. Specific courses within these four categories were listed. Responding to the home economics courses, nearly half of the respondents indicated food science was extremely or quite important (Table 3). Consumer economics was rated extremely or quite important by 42 percent of those responding. Over one-third (38%) said that food management was extremely or quite important. Among those responding, 79 percent indicated that clothing and textiles was of little or no importance and 75 percent stated that family studies and child development was of no importance.

Several business courses were highly valued by respondents. A majority of the respondents rated management (71%) and marketing (66%) as extremely or quite important. Both economics and finance were rated extremely or quite important by more than half (56%) and accounting was rated extremely or quite important by one-half of the respondents.

Among the communication courses, two-thirds of the respondents rated public speaking as extremely or quite important. Technical writing was rated extremely or quite important by nearly one-half (48%) of the respondents. One-half indicated that radio and television production was of little or no importance.

All three political science courses were considered to be of at least some importance to all respondents. Of the three, legislative process was considered to be extremely or quite important by the highest proportion (42%).

Respondents were asked to rate the importance of selected personal and academic characteristics when considering applicants for consumer service positions. Ten personal and academic characteristics were listed, along with an open-ended "other" category. Those personal and academic characteristics which were considered extremely or quite important by a majority of respondents were ability to work with people (98%), leadership ability (87%), speaking ability (85%), writing ability (78%) and above average grade achievement (54%) (Table 4). Two characteristics, experience in government affairs and willingness to relocate, were considered to be of little or no importance by the respondents.

TABLE 3. Importance of Courses to Employment.

	Importance						
	Extremely or Quite		Some		Little or No		
Courses	No.	%	No.	%	No.	%	Mean
Home Economics Courses							
Consumer Economics	20	41.7	12	25.0	16	33.3	3.08
Food Science	23	47.9	4	8.3	21	43.8	2.88
Food Management	18	37.5	7	14.6	23	48.0	2.78
Personal and Family Management	15	31.2	6	12.5	27	56.3	2.44
Household Equipment	10	20.8	7	14.6	31	64.6	2.27
Family Studies, Child Development	3	6.3	9	18.8	36	75.1	1.77
Clothing and Textiles	4	8.3	6	12.5	38	79.2	1.67
Business Courses							
Management	34	70.8	9	18.8	5	10.4	3.94
Marketing	32	66.7	9	18.8	7	24.6	3.88
Economics	27	56.3	10	20.8	11	23.0	3.58
Finance	27	56.3	12	25.0	9	18.7	3.54
Advertising	22	45.8	15	31.3	11	22.9	3.46
Accounting	24	50.0	12	25.0	12	25.0	3.38
Communications Courses							
Public Speaking	32	66.7	8	16.7	8	16.7	3.77
Technical Writing	23	47.9	12	25.0	13	27.1	3.25
News and Feature Writing	18	37.5	11	22.9	19	39.6	2.83
Radio and T.V. Production	10	20.9	14	29.2	24	50.0	2.42
Political Science Courses							
Legislative Process	20	41.7	12	25.0	16	32.4	3.10
Public Policy	19	39.6	15	31.3	14	29.2	3.10
Law	17	35.4	16	33.3	15	31.3	2.98

TABLE 4. Characteristics Important to Employment (Note: N varies).

	Importance							
	Extremely or Quite		Some		Little or No			
Characteristics	No.	%	No.	%	No.	%	N	Mean
Ability to Work With People	45	97.8	0	–	1	2.2	46	4.83
Speaking Ability	39	84.8	5	10.9	2	4.3	46	4.39
Leadership Ability	39	86.7	3	6.7	3	6.7	45	4.20
Writing Ability	36	78.3	3	17.4	2	4.3	46	4.15
Above Average Grades	25	54.4	18	39.1	3	6.5	46	3.57
Business Experience	19	41.3	19	41.3	8	17.3	46	3.33
Willing to Travel	17	37.0	17	37.0	12	26.0	46	3.17
Consumer Affairs Experience	15	33.3	17	37.8	13	28.9	45	3.11
Willing to Relocate	13	28.9	13	28.9	19	42.2	45	2.80
Government Affairs Experience	8	18.6	13	30.2	22	51.2	43	2.47

Job responsibilities of consumer service personnel varied widely according to the 30 organizations who responded to this question. The responsibilities most frequently mentioned were: liaison with the public or with teacher groups, marketing, preparing promotional materials, customer service, complaint mediation, sales, and purchasing or buying (Table 5). Respondents listed as many as five different job responsibilities. The responsibility most frequently listed first was customer service, followed by investigating complaints, marketing, and sales.

TABLE 5. Job Responsibilities.

Job Responsibilities	Total No.	No. of Respondents in Order of Response				
		1st	2nd	3rd	4th	5th
Customer Service	5	4	1	0	0	0
Investigate Complaints	3	3	0	0	0	0
Sales	5	3	2	0	0	0
Marketing	6	3	2	1	0	0
Public Liaison--Teacher Groups	7	2	2	1	1	1
Complaint Mediation	5	2	3	0	0	0
Preparing Promotional Materials	6	0	2	4	0	0
Purchasing or Buying	4	1	1	2	0	0

Consumer service personnel are given widely varying titles in the organizations surveyed. The most frequently given title was that of "consumer affairs," although only seven respondents reported use of this title. Other fairly popular titles were "customer relations," "manager," "sales representative," "home economist," "consumer service specialist," and "management assistant." At least eight other titles were used by one or more of the organizations responding.

Twenty respondents named an entry level position for consumer service personnel in their organization. Thirteen different positions were identified. Most frequently mentioned were "consumer service representative" and "sales trainee" followed by "energy specialist" or "utility representative," "investigator," and "supervisor" or "director." All other entry positions were identified by only one of the respondents.

When asked what suggestions they would offer to make the consumer service curriculum more responsive to the needs of their organization, the majority of those responding (74%) suggested more business courses. One-fourth suggested more mass communications courses. The home economics courses most often recommended were foods courses (18%).

One-third of the respondents (16) indicated a willingness to work with undergraduate students in either a summer work experience or field experience during the school year. Several noted conditions but all sixteen gave contact names.

CONCLUSIONS AND IMPLICATIONS

The area of consumer service or consumer affairs continues to offer opportunities for home economics graduates. A large proportion of the organizations responding currently employ persons with a consumer service background and more than half of those who do not would consider doing so. These organizations are varied in terms of the products they sell or the services they offer.

Ohio businesses offer a wide range of employment opportunities for consumer service graduates. Advisors should continue to point out that the business concentration is a sound choice for specialization within the major and encourage those interested in business employment to take as many business courses as possible. Because many businesses which employ consumer service personnel are food industries, the importance of foods courses also may need to be emphasized.

Communication skills, particularly writing and public speaking, were highly valued by the respondents. Such skills are developed through academic courses currently required in the consumer service curriculum or elected by students at this institution. Required courses include Essentials of Public Speaking, Technical Writing, and a choice of Interpersonal Communications, Radio and T.V. Writing, Public Relations, News Writing or Feature Writing. This study indicates that radio and television production courses may not be as important to our students as additional business courses.

Several personal characteristics were important to the respondents, such as the ability to work with people and leadership ability. Advisors may need to work with students to be sure the students are developing these characteristics through course work or extra-curricular activities.

To acquire consumer service positions, students need to have a broad definition of the roles consumer service specialists have in organizations and contact a diversity of organizations. In some cases graduates should be prepared to approach organizations who do not currently hire consumer service personnel and convince them that their abilities and skills would be valuable to the organization. Since job responsibilities and job titles are quite varied among organizations, students need to consider a wide variety of positions with diverse job titles. Matching skills and abilities to position requirements rather than to position titles should be of foremost concern.

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AIRLINE DEREGULATION: A POLICY FIASCO

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We meet at a location which tragically symbolizes one of the arguments I make today. From my perspective, the pressure to cut costs to the bone, perhaps as part of a larger effort to finish the job within the funds allocated through a competitive bidding process, contributed to the accident that occurred in this building not long ago. I am just as convinced that some truckers, who had mortgaged their lives to buy second-hand rigs, believing that rosy predictions of huge profits were correct, felt pushed against the proverbial wall by the latest round of "user fees" recently enacted in Washington. Similarly, I can understand why a despondent Californian, denied unemployment benefits, would walk into the public agency's office in Sacramento, shooting the first employee he saw. In a sense, the last two cases may be said to represent intentional behavior, while the manager who diligently cuts costs to the bone does not expect the outcome to be literal as well as figurative. Pressure, or stress, distorts judgment, and it is well to recognize as much.

My current position is slightly different than it has been over most of the past two decades. I had adopted the view that the transportation industries had some unique characteristics which called for a different public policy than generally applicable elsewhere. I now conclude that the need for economic regulation is not unique to transportation industries, but is a requirement for the sustained viability of *any* industry. Economic regulation is not an exception to the norm of unrestricted competition, but is itself the norm. In so stating, I do not suggest that the precise form and method of regulation need be identical for all industries, only that some form of regulation is inevitable and necessary. If it is not legislated or otherwise authorized, producers are left with little choice but to resort to illegal collusion.

Economists argue that economic regulation should be used only in extremely rare circumstances. All forms of transportation are not proper subjects of regulation, so they say, and neither is our communications system. While I once agreed that economists generally were correct about many industries, but not about transportation, I now suggest that they are *wholly incorrect* with respect to *all* industries. As I shall argue, we can no longer afford to permit economics to destroy economies. Where the airline industry is concerned, my position differs not only from that of the economists, but also from those in industry and elsewhere who might retain a longing nostalgia for the 40-year regulatory regime of the Civil Aeronautics Board (CAB).

The basic case is easily made for price and capacity regulation of public transportation systems. Suppose, for example, I wish to fly from New York to Los Angeles. Traditionally, three airlines offered me seats on flights scheduled in close proximity to meet peak travel demand, In Milton Friedman's already classic phrase, I was "free to choose" one of the three, leaving the other two with empty seats. The 1978 U.S. policy of deregulation encouraged four additional airlines to offer service on the same route. I now have greater "freedom to choose" (seven alternatives), but the result is six empty seats. This problem is inherent to any transportation system organized to provide "head to head" competition, because the service being offered cannot be held in inventory awaiting other customers; service is destroyed by competition itself. It follows that the greater the direct airline competition, the greater the number of empty seats, the more fuel wasted in moving them about, and the higher the cost per passenger actually moved.

There is no way to deal with the empty seat problem except by limiting the flight frequency. In principle, the problem can be minimized only by eliminating direct competition. If a transportation system is to be so operated, a case can be made for public supervision of safety and prices. This is the classic outline of any industry defined as a public utility; if it is in the public interest to permit a monopoly operation, the monopolist cannot be permitted complete control. The corollary question is whether the public interest demands that such a system be kept in operation even if this requires cash subsidy. While all industries are subsidized in some way, only cash subsidies seem to be a major policy issue.

This position has not seriously been considered since the Hoover Administration set up a regulatory regime, a piece of history seldom explored. Any who suggest that the two standard alternatives of "regulated competition" and "unregulated competition" should be broadened to include consideration of such a third alternative are, as a matter of routine, not invited to appear before legislative committees. I am hardly alone in this category, since all such hearings and policy explorations are limited to those who espouse one of the two conventional alternatives. This is especially helpful to those holding hearings, who usually proclaim that *all* academics who study such matters are advocates of deregulation.

The brief statement of my position has been labeled inaccurate by two ardent deregulators who wrote to *Regulation*, the magazine published by the American Enterprise Institute. Every traveler between New York and Los Angeles does not leave six empty seats, because every airline does not operate enough flights to satisfy the entire demand. While this is technically correct, the fundamental purpose of deregulation was to provide more alternatives for each traveler. This is why airlines began invading each other's route structures. If there are to be more alternatives available for each passenger, an increase in empty seats is inevitable, but this is not the only example of waste. As more and more carriers fly the same routes, the scheduling of pilots and mechanics also becomes more wasteful. If, e.g., United flies less frequently than it used to, because Pan American has entered the transcontinental war, there is considerable associated waste.

The result of deregulation is typical and easily described. As more and more flights are scheduled, price cutting wars take hold. These dominate the 75 percent or so of tickets now sold on some discount or another, usually below cost. In order to recover some of these losses, airlines then soak the standard business traveler. Just before the air controllers' strike in 1981, the transcontinental coach fare had risen to $956 round-trip. When flights then were restricted, things became a bit more efficient, fares dropping. Now that many of the restrictions have been removed, standard coach fares once again stand at the $1000 mark. If you travel as a tourist, you may benefit, but is it reasonable to have coach travelers provide so much financial support to tourists? The larger issue, however, lies in the economic theology itself, because price-cutting wars and bankruptcies are not the unalloyed successes the theology makes them out to be.

THE FALLACIES OF THEOLOGY

In taking on the conventional wisdom, I raise questions central to activities of groups such as this. Consumer-oriented groups are among the primary victims of the theology, because they have been encouraged to adopt the seductive belief that more competition always benefits the consumer. Such groups also have been in the forefront among those who have neglected what I take to the crucial connection of economic regulation and social regulation of health and safety standards. While this connection is important in virtually all industries, it is especially crucial in the airline industry. As supporters of the conventional wisdom, groups such as this perform, in my view, a great disservice to consumers. This is a fitting place to discuss the fallacies in the theology. because "applied economics", or "home economics," stands at the very center of that theology.

Classical economics is attractive now, as it was in Adam Smith's time, because it promises escape from the repressive authority of the monopolist, socialist or capitalist. The market often is pictured as a system of "mutual exchange" or "voluntary agreement", but this is a gross misrepresentation. This mythical form of "voluntary association," in principle a form of anarchism, deals only with the buyer-seller agreement that is the final step of a longer process. If one understands that process, one understands economics which, at root, really is quite simple. In principle, economics strives to reverse the authority relationship by enabling the consumer to dominate sellers.

The purpose of a market is to make each consumer a "sovereign" who "votes" for one supplier while rejecting others. If this is the analogy of Keynesian Nobel winner Paul Samuelson, the monetarist Nobel winner Milton Friedman insists that unless the consumer is "free to choose" among competing producers, there can be no market in shirts, shoes, or steel. On this most fundamental matter, schools of economic thought disagree not at all. Unfortunately, this duplication of output can become so excessive that much of it cannot be sold for the costs of production. If this is how markets work, and the evidence and the theory are clear enough, then our thinking is upside down. Economic problems and slumps are not traceable to the insiders (managers and workers) or outsiders (policy-makers) often accused of subverting economic principles. Some blame managers who seek short-term profits but ignore long-term planning, while others criticize overpaid and unproductive workers. Still others aim at the Federal Reserve for being either "too tight" or "too loose" with money supply, or at politicians callous toward unemployment or casual about runaway deficit spending. Suppose, however, that the problem lies in the basic design of markets themselves which, no matter how cherished, make redundant capacity inevitably lead to depression? Are Keynesians, who would stimulate demand, and supply-siders, who would take the opposite tack, as far off the mark as other schools of economic thought which ignore this problem?

If in principle the consumer is the boss, producers are employees who respond to the boss's demands, a word with an involuntary connotation. When a dozen shirt manufacturers each offer a customer a shirt when only one is sought, the customer "maximizes efficiency" by rejecting eleven shirts in favor of the "one best buy." The greater the number of competing firms, the greater the number of shirts rejected at the time of each purchase, and, on this matter, economic and management theories have a curiously symbiotic relationship. If economic theory holds that competition improves efficiency, management theory holds that duplication is inefficient. If the single buyer and many sellers constitute a temporary social organization, "efficient" competition becomes "inefficient" duplication. The buyer uses a management principle (eliminate duplication) to turn away all sellers but one. The problem is not overcome by shifting attention to "aggregate" demand and supply. Taking all purchases together, supply always must greatly exceed demand if consumers are to make choices among as many alternatives as possible. Economics, then, begins with the consumer, and "applied economics" seeks to make the consumer as competent as possible at making choices. Given the traditional role of the wife as manager of the home, this is the origin of "home economics."

Locked into a desperate struggle, each shirtmaker must offer the customer lower and lower prices in an attempt to underbid competitors and get at least some return on the money spent to make shirts. This compels shirtmakers to search for ways to cut costs, and wages come quickly to mind. Managers lay off some workers (the basic function of any manager is to increase unemployment), asking those remaining to turn out more shirts for lower wages. The next step is to close down plants where labor costs are high, then make shirts in other parts of the country (perhaps with illegal aliens), or overseas. The search for "efficiency," "productivity," and "lower prices" becomes paradoxically self-destructive. Unless those laid off quickly find new jobs, they become unable to buy any shirts at all. The highest management efficiency is achieved when industries churn out maximum production, but few can afford to buy it. Without much in the way of conscious thought, managers and consumers actively seek to make slaves of workers. How does the paradox hide this from us?

Economic principles seek to maximize consumer efficiency by minimizing consumer spending. Management principles seek to maximize producer efficiency by minimizing producer spending. Stripped to essentials, economic theory ignores the role of the consumer as a worker, and management theory ignores the role of the worker as a consumer. Because each theory focuses only upon one-half of the individual, neither considers social efficiency. And, in the classical theory, the unarticulated assumption is that consumers, whose interests are uppermost in the minds of members of this group, are persons of independent wealth. In economics, they are "givens."

In theory, supply "responds" to demand, although some argue (John Kenneth Galbraith and conservative supply-side economists agree on this) that supply can "create" demand through advertising or innovation. But with many suppliers responding to, or seeking to create, the same demand, supply inevitably must exceed demand. Indeed, this is an explicit objective of public policy; antitrust laws encourage as much redundance of output (competition) as possible, because only as supply goes up will prices come down. The faith remains unchanged that with all-out competition, the "invisible hand" will improve overall efficiency by driving inefficient producers into bankruptcy. Failures are now higher than at any time since the Great Depression, but economists hesitate to proclaim what their theories hold, i.e., the greater the number of failures, the more efficient the market.

Despite vague caveats, economists remain generally committed to "Say's Law" (1803) that any market system will provide enough demand to buy its output, at least in the sense that anything produced can be sold if prices fall low enough. From a hidebound conservative perspective, this becomes the operational explanation for "trickle-down" concepts; after the rich have made their choices, the poor will buy the leftovers at bargain prices. To the Keynesian, it may be necessary to "stimulate" demand enough to make sure this happens. Both assume, unfortunately, that overproduction is impossible when, indeed, overproduction is the fundamental purpose of a market. Say's Law, ignoring the basic relationship of one buyer to many sellers, cannot hold.

When American air traffic controllers were fired for striking in 1981, substantial reductions in the number of flights at major airports did not hinder air travel at all, and airlines still had to offer discount fares to fill many of their seats. When the tragedy of the "tainted Tylenol capsules" occurred in the fall of 1982, the removal of that product from the market did not leave buyers without pain-killers. Economists who favor all-out competition, of course, would not sympathize with airline managers forced to sell at ever-declining prices, because the economists believe this compels firms to become more efficient. If, however, redundant production, not lack of demand, is the cause, and perhaps the only cause, of depressions, recent history appears in a different light.

THE UBIQUITY OF REGULATION

If regulation is necessary for stability of some sort, the evidence should easily be available, and it is. Agriculture is only the most obvious example, even if we hesitate to use the word "regulation." We have used price supports, plowing crops under, government purchases of surpluses, paying farmers to keep land idle and, this year, the "crop-swap" program of giving farmers surpluses to sell. In other industries, duties, tariffs, quotas, cartel agreements and the like, all labeled as cynical "protectionism", have been widely used because they are necessary. Even World War II was a form of regulation, and in two ways. This was the first war to regulate excessive competition by bombing it out of existence, an action which led to the long period of postwar American prosperity. Things got better during the war, not solely because of full employment and Keynesian demand stimulation, but because home-front supply was limited by the need for military production.

In the United States, the biggest firms have been able to engage in a form of unacknowledged self-regulation, with the unwitting help of the Justice Department. In the American pattern of oligopoly, large firms have been strong enough to "administer" prices, a necessity for long-term contracts with suppliers and workers. This form of stability was also useful to consumers who would prefer to see companies stay in business long enough to honor warranties and make repairs. The biggest firms, such as General Motors and General Electric, could have become larger than they did, but the largest firm in any industry must be wary of antitrust intervention if its market share becomes too large. Thus, fear of divestiture acted to restrain competition to some extent until revitalized European and Japanese industry (together with new industry in developing countries) gave us the huge overcapacity we have around the world today. Not all of these more or less legal forms of regulation are equally desirable, nor are the illegal forms which producers often feel compelled to use.

When there is no other way to achieve some form of industrial stability, producers illegally plan (or collude) to bring this about. Often, the collusion supports important public policy objectives. In the famous electrical manufacturers' conspiracy of the 1950s and 1960s, the biggest firms, GE and Westinghouse, jointly planned with smaller firms to make sure the Justice Department would *not* intervene. The basic purpose of the conspiracy was to keep some business away from GE and Westinghouse who, left on their own, could have driven smaller competitors to the wall. Today, the Justice Department actively pursues price-fixing and bid-rigging violations in the highway construction industry, but firms really have little choice. Five or ten construction firms cannot afford to assemble the people, equipment, and materials for a contract, knowing that only one will get the job. They have been dividing the business for years, a process that should be legalized, done openly, and with contracting agencies fully participating. Competitive bidding leads to prices that are too low which, in turn, cause widespread cheating, corner cutting, and risks to public safety.

Industries forced into a completely unregulated environment wander into collapse, and the results are not always lower prices, at least not to all those involved. Deregulated bank interest rates mean profits for rich depositors, but high prices for borrowers of modest means. Deregulated rates, moreover, have more to do with keeping interest rates high than any actions by the Federal Reserve. Deregulated professional sports mean astronomical salaries for some players, but also huge tax subsidies from cities to keep teams from moving. The deregulated telephone system will produce higher rates for local telephones. And the list could go on, and on. The deregulated transportation industries are in sorry shape now, of course, because already difficult problems were made much worse by deregulation. The problems all along were those of too much competition, not too much regulation, so that adding more competition simply turned difficulty into disaster.

The historical record is clear enough, provided one is prepared to see it. While economists tend to assume that the transportation industries have been economically regulated (the railroads from 1887, the trucks from 1935, the airlines from 1938), the industries *never* have been regulated in the classic mode usually associated with regulation, i.e., the "natural monopoly" design historically accepted for public utilities. Regulation was established in the transportation industries only after widespread acceptance of the notion that "excessive competition" already had run amok, and that competition must therefore be "limited" in some way. The method chosen was to "grandfather in" all existing carriers, but without asking if the existing number of carriers already was too many for efficient operations. Had the question been asked, the outcome might have been a reduction in the number of railroads, truckers, and airlines, but the regulatory bodies never had that option. Instead, they were left to suffer the slings and arrows of those who, dedicated to classical theology, persistently shouted, "Why don't you let still more companies enter the business?" I suppose that many believe even today that we need more airlines, more trucking companies and, perhaps above all, more cheese factories.

Today, the deregulated industries are much worse off financially than before deregulation. To the advocates of deregulation, of course, deregulation, deregulation cannot be a *problem* at all because, in their eyes, deregulation is always a *solution*. There is no way to answer such questions factually, because it is technically impossible to empirically validate any propositions about public policy. One can only collect data associated with a *real* situation, then compare it against the imaginary data of a *hypothetical* situation. Many arguments begin, e.g., with such assertions as "If standard fares have risen since airline deregulation, they have risen less than would have been the case with continued CAB regulation." The only *fact* is that fares have fluctuated, mostly upward for standard fares, and predictions of what would have happened under CAB regulation, or without the air controllers' strike, depend solely upon any observer's judgment. All arguments are based upon the plausibility of competing *theories*, not proven cause-effect relationships. What I argue next, then, depends upon plausibility, not proof.

ECONOMIC REGULATION AS A PREREQUISITE FOR SAFETY

In a great many industries, greater competition increases the danger to the health and safety of workers, consumers, and third parties. Among industries I have looked at, this is the case for airlines, trucking, and coal mines. This can be discounted by arguing that the data show only "coincidences," not "correlations," but when a pattern repeats itself so often, we are entitled to ask if any discipline can amount to much when it ignores the subject. Admittedly, it is tempting to confine research to what can be easily researched; price trends are easily followed, but it is more difficult to relate price data to the additional costs imposed by accidents and expanded safety enforcement. This poses two policy dilemmas seldom addressed. Strong unions, including the troubled Teamsters, contribute mightily to high safety standards, and small business contributes just as mightily to tragedy.

Airline accidents are relatively few in number, so that one cannot rely wholly upon statistical data, but must instead undertake to study and evaluate the policy environment in which firms operate, for the sake of understanding how and why the environment contributes to tragedy. The terrible accident in Washington slightly over a year ago can, I believe, be traced to the environment of deregulation. To cite the findings of the National Transportation Safety Board:

- the pilots had little experience in winter flying conditions
- the airline which de-iced the airplane before takeoff did not operate the type of airplane in use, and had no operating manual for that airplane

- there was poor coordination between the ground crew (from one airline) and the flight crew (from another)
- as with a number of airlines, the crew had been urged again and again to avoid the use of full engine power, because this increases maintenance costs and can have an adverse influence upon warranty conditions

When a small airline is encouraged to begin operating on different routes, it has no institutional memory to bring to bear on its training programs. Nobody can legislate in detail the solution to such problems, but there is a great advantage to having airlines fly on fixed routes for long periods, so that at least the senior members of each crew are used to dealing with critical combinations of weather and local flight rules. From my perspective, the current trend toward more airline accidents, while not immediately significant in statistical terms, is wholly traceable to deregulation.

Historically, unregulated airlines always have had poorer safety records than regulated ones and, in recent years, the Federal Aviation Administration (FAA) has had to give close attention to commuter airlines and other small carriers, such as the one suspended only a few weeks ago for unsafe operations between New York and Guyana. The greater the number of firms in an industry, the greater the number of inspectors required to search them out and supervise them. Simply put, deregulation leads inevitably to one of only two possible outcomes: (1) if the agency responsible for safety does not increase its budget, safety declines; or (2) safety is maintained only by huge increases in enforcement budgets. With budgets being pared everywhere now, who can doubt what is happening?

On these matters, Alfred E. Kahn, who spearheaded deregulation as CAB chairman, once branded me "irresponsible" for daring to suggest that deregulation adversely affected safety. Yet Kahn himself has testified to the connection. In advocating that the CAB continue the rule he enacted about the handling of "bumped" airline passengers, he wrote as follows to The Washington Post:

> When customers are inadequately informed, competition may take the form of providing adulterated or unsafe products, with the least scrupulous among the competitors forcing the more scrupulous to cut corners as well. It shouldn't be surprising that many ethical business people themselves are eager to have the government set limits on this kind of competition. The Washington Post, June 19, 1982 (letter).

If all competitors are compelled to lower standards, it is of little significance to buyers which competitor first began cheating, or which competitor may be more genetically dishonest than others. The more logical conclusion is that if everybody must cheat, the fault is in the system, not the individuals. Further, an important aspect of regulation is that it accomplishes the needed function of "fully informing" consumers. A moment's reflection should indicate, moreover, that the airline problem of "overbooking" is itself a by-product of head-to-head competition.

It is worth noting in addition that the "upstart" airlines, those newcomers to the business who have featured very low fares (Kahn is a director of one such firm), are the targets of many more passenger complaints than are the established carriers. I do not allege that the complaints are safety-oriented, but passengers apparently believe that the quality of service is less than they had expected. This merely follows a pattern that has recurred many times in the past. In the years following World War II, when the "unscheduled" carriers were struggling to survive, Better Business Bureaus around the country submitted innumerable complaints of shabby service and operations.

Generally, the deregulation champions rely largely upon insurance to solve such problems. If safety suffers enough, of course, firms will be unable to get insurance. Unfortunately, this withdrawal of insurance coverage occurs only after tragedy strikes. We are dealing here, as in many industries which affect health and safety, with the necessity of assuring consumers that what they buy is safe. I urge upon you the notion, perhaps a new one to you, that economic regulation is a prerequisite to safety regulation, and that safety regulation is virtually impossible in a highly competitive market. This connection of economic and safety regulation, of course, is applicable, as I see it, across the board, not a connection unique to the transportation industries.

The greater the competitive pressures, the more the firms in any industry are tempted to become careless about the health and safety of workers and customers. When consumer-oriented groups, therefore, diligently seek to combine all-out competition with effective regulation of safety standards, they work at cross-purpose with themselves. When such groups fail to press legislators to pay attention to the evidence about safety, they commit the intellectual crime of permitting their theories to smother the search for correlations. As I put it in one article, we are entitled to ask if Ralph Nader and Milton Friedman are not thoroughly confused when they agree with each other on a major issue. And, if producers were assured that prices would include the costs of meeting safety standards, they would complain less about the alleged "burdens" of such standards. We need, then, more economic regulation in many industries, and forms of regulation not confined within national borders. As it stands now, we are on the threshold of repeating the experience of the 1930's. The sequence of overbuilding, trade wars, and military conflict looms immediately ahead.

We are out of step with the world, most countries having learned long ago that transportation is a public utility. The best transportation systems in the world are government operated, but I do not see the question of ownership as crucial. It is clear, however, that airline regulation is a matter of global concern. Whatever the situation now, we cannot forever afford to fly untold numbers of empty seats back and forth across the oceans. This is wasteful on a scale that regulators could not approach, even if they earnestly attempted to be as wasteful as possible. As was the case within the U.S. from 1938 to 1978, the problems of international aviation are not too much regulation and too little competition, as the long-term critics of the International Air Transport Association (IATA) would have it, but precisely the opposite.

The CAB and ICC never really had a chance; they were required, of all things, to subsidize head-to-head competition, about the silliest and most inefficient form of regulation imaginable. These regulatory regimes were also wasteful in spending enormous sums trying to decide how many firms should be licensed to operate on given routes. The only rational standard then and now is one firm per route, no more. It is time to read what historians have long told us about the causes of depressions, and time to remove economics from its leading position. With three economic advisers in the White House, it is small wonder we are in trouble.

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ADDENDUM

After this article was written, but before it was sent off for printing, an incident occurred which demands at least some attention. American Airlines and Braniff International had conducted vigorous head-to-head competition at the Dallas Airport which served as a "hub" for both, Braniff ultimately declaring bankruptcy. At the time it shut down, Braniff executives charged that American had indulged in "unfair competition," the first accusation involving computer reservation systems. Now, the Justice Department has stepped in with evidence which allegedly shows that the president of American, in a telephone conversation with his Braniff counterpart, had suggested that the two firms agree to a 20 percent rise in fares so as to offset the huge losses both were experiencing in price-cutting wars. A New York Times report then indicated (Feb. 26) that American had succeeded beyond measure in dominating the market share war at Dallas, carrying more than 60 percent of the passengers at that airport.

Financial analysts noted, however, that despite the cost-saving concentration of its operations at Dallas, American continued to suffer losses. These were attributed to a general decline in travel, very heavy use of discount fares, and the high operating costs associated with the company's five unions. I suggest that such analyses typify the manner in which modes of economic thinking hide from view other evidence which, if examined at length, would lead to considerably different conclusions. Some of the advocates of deregulation repeatedly have suggested that the current emphasis upon "hub-spoke" operations is a prime example of the efficiencies introduced by deregulation. Yet "hub-spoke" operations are anything but efficient when viewed in overall perspective, and some attending this conference may be examples of what I now argue.

From the perspective of any one airline, concentration of operations at a single large airport does indeed promise great efficiencies. Many, perhaps most, flights can be operated in an "out and back" routing system which permits substantial savings on maintenance and training costs. When many airlines follow this pattern in a highly competitive market, however, efficiency quickly shifts to inefficiency. To cite just a single comparison, I use the concentration of American's flights at Dallas and that of United's flights at Chicago. The passenger traveling to New York from Dallas can get frequent and efficient nonstop service from American, but the same traveler also can fly via United through Chicago. In trying to fill empty seats, United offers a lower regular coach fare, and perhaps it also makes available a higher number of discount seats. Passengers willing to exchange a few hours in time for a lower fare then fly via United which, if enough passengers fly this circuitous route, may add extra flights. As more and more passengers do this, however, costs go up and losses mount even more.

More circuitous travel means more total landings than required in an efficient system, and more landings ultimately increase maintenance costs. Nor are increased costs limited to airplanes and wasted fuel. More baggage handlers are needed because there is an ever increasing amount of baggage to be transferred at every "hub." At first, the hordes of connecting passengers are a boon for airport concessionaires, but the crowds give a very misleading picture of what is needed in the way of gates and terminal facilities. Airports are encouraged to expand in ways that actually would be unneeded in a system that was efficient from an overall perspective. In the case at hand, of course, American loses out on some nonstop passengers in and out of Dallas, and must seek to expand (at great cost) its search for "spoke-hub-spoke" passengers. As each carrier improves its operating efficiency, the system as a whole becomes less and less efficient. Are there solutions?

Of course there are, but deregulators would not approve. One such solution is a "natural monopoly" on all nonstop routes in and out of a "hub." So long as Federal Express has little head-to-head competition, for example, its use of Memphis as a "hub" makes considerable sense. The second solution is the one we abandoned. "Fixed prices" (regulated fares) would remove the encouragement to passengers to fly via circuitous routes. If any of you arrived via such routing, your travel was, in the sense of saving money, "efficient" from your point of view, but was it socially efficient? After all, you are paying less as your mileage increases. I suggest it is time to stop blaming everything on a decline in travel (in principle, supply should adjust to demand, but it does not), heavy use of discounts (deregulation compels price-cutting wars), and unions seeking to protect members from the ravages turned loose when policy-makers read economics textbooks.

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THE COST REDUCTION IMPERATIVE OF DEREGULATION

Marvin S. Cohen, Stroock & Stroock & Lavan[1]

ABSTRACT

The combined pressures of the deep recession and continuing competition are forcing major airlines to reduce costs and hold fares down. Carriers are restructuring toward strong hub and spoke systems, renegotiating work rules and salaries, and generally increasing efficiency. Since deregulation, the public has gained increased convenience and a diversity of price/service options.

The combined pressures of the deep recession and continuing competition are forcing the major airlines to confront the realities of deregulation--they are finally beginning to reduce costs per seat mile and to hold fares down. The fundamental premise of deregulation--that competition would compel efficiency--is being substantiated as major carriers restructure toward strong hub and spoke systems, renegotiate work rules and salaries, and reduce overhead.

During the deregulation debate of the middle 1970's, supporters had stated that competition would force productivity improvements and increased efficiency--resulting in lower costs, lower fares and a diversity of price-service options for the public. Opponents had contended that labor costs would not diminish, and that capital costs would increase because of the higher risks in an unregulated environment. They had claimed that open price competition and route freedom would allow large airlines to drive out small ones, then when only a few large airlines were left they could raise fares and gouge the public. Some had even warned that price wars would destroy the national air transportation system.

Proponents of deregulation had pointed to the success of relatively unregulated intrastate airlines such as Southwest and PSA in offering low cost, low fare service at a profit. They had said that, since absent regulation it would be relatively easy to start an airline or to enter a new market, large carrier monopoly power would not be a problem. With low entry barriers, destructive competition would be senseless; a carrier which used below cost pricing to drive out a competitor could not sustain high fares long enough to recoup losses.

The experience of the past four years has been somewhat equivocal. Strikes, high oil prices and the long, deep recession have had a significant negative impact on the industry. Fare wars in leisure markets have contributed to trunk carrier losses. But, on the whole, the benefits of deregulation are vindicating the arguments of its supporters. The cost reduction imperative of deregulation is now forcing major airlines to seek profits by decreasing costs rather than increasing fares.

Small airlines are growing, and in many cases prospering. The industry is becoming less, rather than more, concentrated under the new competitive system. Because competition is forcing significant productivity improvements, and consequent cost reductions, fares have not kept pace with skyrocketing fuel costs. Service convenience in general has improved and small communities are receiving better service than before deregulation. But industry problems are causing some new talk of re-regulation. Large airline losses are blamed by some on the new competitive environment. However, for the most part, the people who run the airlines don't blame deregulation. They say that without the freedom and flexibility which deregulation allows them, the losses would be worse. Some medium sized cities complain of reduced air service. However, much of this has resulted from a market-caused restructuring of service by individual carriers--to provide direct service from small cities to large cities, without the stops at medium sized cities which regulatory control of route structures required.

Price wars have occurred, but most of them appear not to be destructive or predatory efforts by large airlines to drive small ones out of business. They are of two types:

1. Low fares offered by a new entrant which can make a profit at those fares, matched by an incumbent which consequently loses money and is forced to cut costs; and

2. Low fares offered during periods of slack traffic and excess capacity in an effort to fill empty seats.

While price wars may be contributing to industry losses, they are not destroying the system. One carrier has gone into bankruptcy and a few others face the possibility of a similar fate. But there are identifiable invididual reasons for the problems of each of these carriers, such as ill-advised mergers, or rapid expansion. The former local service airlines are thriving, and it is becoming apparent that most carriers will survive this difficult period. Last year, as the U.S. economy continued to stagnate and competition grew stronger, some major airlines began to reduce costs and hold fares down in order to retain passenger traffic. While last year's industry losses were high, if the economy recovers this year, many airlines are positioned to earn healthy profits.

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Airline Profitability

Recent experience demonstrates that in periods of moderately good national economic health, the airline industry can engage in price competition and still be profitable. But when the economy is poor the airline industry also does poorly. In the current worst recession in forty years, this industry, hampered also by the shortage of air traffic controllers, has suffered record losses.

1977-1978 was a period of moderate economic health for the country. Relaxation of price regulation in 1978 allowed real air fare competition for the first time. New discount fares attracted passengers, raising load factors to record levels. Although yields and average fares declined, record profits were achieved.

Just as route regulation was being relaxed in the middle of 1979, the price of oil began to skyrocket. The price rose quickly from $13.80 per barrel at the beginning of the year to over $30.00 in 1980. The effect on jet fuel cost was to increase the price per gallon from $.39 in 1978 to $.89 in 1980 and $1.04 in 1981. Such a drastic change had drastic effects. The United States and the other industrialized nations of the world have since 1979 been suffering the most serious recession since World War II. While various economists and politicians blame economic and political decisions, many are beginning to realize that the enormity of the oil price increase was the most significant factor contributing to the economic ills we now share with our global economic partners.

Most airlines attempted to pass the increased cost of fuel on to passengers--average fares increased 26.5 percent between 1979 and 1980. Since the cost of living increase during the same period was in the range of 10 percent, the hefty increase in the cost of air travel took its understandable toll in traffic losses. Scheduled airline traffic declined 2.7 percent.

As the economy continued to stagnate, traffic did not rebound in 1981. Although a brief economic upswing in early 1981 gave some hope of recovery, the economic doldrums resumed in the latter half of the year. Airlines continued to increase fares in early 1981, as fuel prices continued to increase. But as traffic declined another 2.4 percent in 1981, the industry was faced with significant excess capacity--too many seats, not enough passengers.

The illegal controller strike in August 1981 limited access to the nation's 22 major airports. Many analysts thought that this would significantly reduce capacity, allowing fares to rise. Unfortunately, the regulatory system devised by the FAA to apportion airport slots among the carriers induced airlines to maintain uneconomic high capacity levels.

As traffic declined, airlines maintained high service levels to avoid losing slots or giving up market share. This failure of airline managements to adjust capacity to the realities of declining traffic has been an unfortunate legacy of forty years of regulation. Since, under CAB regulation, fares were the same for all airlines in a market, each airline tried to compete by offering more and better service than its competitors. Managements focused particularly on market share--trying to capture the major portion of passengers in each market. After all, costs did not vary greatly among airlines and fares were identical, so the airlines with the most passengers made the most money. Now that pricing and entry are unregulated, costs and fares can differ greatly among carriers. Realizing the ramifications of this, some airline managers are shifting their focus from market share to profitability. It makes little sense to operate ten flights a day to preserve market share if three flights can operate profitably. Each airline must now control its costs and try to set fares at levels that achieve high load factors and still provide a reasonable return.

The most encouraging sign last year among major carriers was the increased ability of many of them to control costs. During the previous three years operating expenses per available ton mile (ATM) had been increasing at the average rate of 17 percent per year. Last year at many airlines expenses per ATM actually declined. Although fuel costs were somewhat lower in 1982 than their 1981 high, and leveled off last summer in the $.94-.97 range, carriers have been cutting other costs as well. Pan Am, American, Western, Republic, Continental and United each reduced operating expenses per ATM between four percent and six percent in the first three quarters of 1982; fuel price reductions can account for only 1.4 percent of these cost savings.

Airlines which suffered some of the most serious losses in 1981--Pan Am, Western, and Republic--have significantly improved their financial positions in 1982, despite reduced revenues, by this cost cutting. United Airlines, which incurred a 1981 loss of nearly $150 million, in 1982 increased its operating revenues more than 3 percent and reduced operating expenses per ATM nearly 4 percent. United's average fares were down 7 percent compared to its fares during 1981, and its traffic rose 11 percent. This combination of reduced costs, reduced fares and increased traffic resulted in a $82 million improvement in operating results in 1982.

In contract, Delta Airlines allowed operating expenses to increase in 1982 and until late in the year, kept fares at 1981 levels or higher while its traffic declined. Its operating results deteriorated $170 million in 1982 compared to 1981. Recently, Delta has lowered fares in an effort to regain lost traffic. But unless it reverses the upward trend of its seat mile expenses, Delta may not be able to maintain the lower fares which cost reductions have allowed other airlines to offer.

Commenters have expressed disappointment at the small growth in 1982 over 1981's depressed traffic levels. But there has been no economic reason for traffic to surge upward. The gross national product in the United States for the fourth quarter of 1982 was, in real terms, below its third quarter level in 1979. In no other three year period since World War II has the economy shown no growth. In the worst recession since World War II, when bankruptcies and unemployment were at post World War II highs, and workers with jobs feared their imminent loss, the airline industry could not be expected to prosper.

The airlines have always made low profits compared to the other segments of American industry. In the long term, the cost trimming which the recession and new competition have forced upon the old large airlines should position them for new and solid profitability when our economy begins to grow again.

Structural Change

Within the airline industry, major structural change is occurring. As route freedom was quickly implemented in 1979, the local service carriers were the major beneficiaries. Trunk carriers abandoned many short haul routes to utilize their 727's and wide bodied aircraft in longer haul, thicker markets. The local service carriers added these former trunk routes to their systems, and expanded into the longer haul trunk routes from which they had formerly been excluded. The dramatic increase in fuel costs between 1979 and 1981 enhanced the cost advantages of their twin engine equipment on short and medium haul routes. At the same time, the relative cost of air travel on short haul trips increased at a lower rate than the cost of automobile travel, stimulating an increase in short haul air travel. The route strategies of many of the local service carriers have been particularly helpful. Piedmont has established linear routes which are allowing travelers in the Southeast to avoid flying through Atlanta; it is also gaining some hubbing benefits at Charlotte, Dayton and Baltimore. U.S. Air has expanded from the Northeast to Florida and from Pittsburgh to the Southwest to balance its summer peaking system with winter traffic and to extend its average length of haul. Both airlines are earning record profits.

The decline in air travel caused by higher fares and the long recession has particularly hurt the operators of large aircraft. Large aircraft require thick markets. Small, twin engine aircraft can serve medium and smaller cities to create efficient feed networks. The size of the three and four engine aircraft limits their economic use in feed networks to the relatively larger cities. The large aircraft operators have, to a significant degree, been developing strong hub and spoke systems to concentrate traffic and fill their larger aircraft while maintaining high frequency of service. Recent CAB studies show that in 1978 only one of ten trunk carriers had 20 percent or more of its departures out of its leading airport. In 1981, six of the ten did.

The success of new low cost airlines like Southwest and People Express presages significant change in the industry in the next decade. Both airlines offer regional service on short and medium length segments at such astonishingly low fares that substantial new traffic is generated when they enter markets. Their low costs have allowed them to earn healthy profits and grow rapidly.

Southwest began in the early 1970's as an intrastate Texas airline operating from Love Field in Dallas. Deregulation allowed it to expand its successful high frequency, no frill, low fare service into surrounding states. In 1980 when other airlines raised fares to cover escalating fuel costs, Southwest maintained its low fares--and ended the year with the highest profit margin in the industry (nearly 30 percent). The airline expanded in early 1982 into Arizona, Nevada and California despite the airport constraints caused by the controller shortage. Notwithstanding the start-up expenses associated with entering new stations, Southwest maintained impressive profitability in 1982. From the end of 1981 to late 1983 Southwest will have grown from a 25 plane to a 42 plane operation. Its new presence in California is sure to have significant long term competitive impact there.

People Express illustrates how low entry barriers have fallen since deregulation. In 1980 a few former officers of Texas International pooled their resources and, with the concept of a low cost airline operating out of Newark and less than $1 million, went to the capital market. Their public offering raised $26 million, enabling them to purchase used 737 aircraft from Lufthansa. In less than a year from its April 30, 1981 start-up, People Express began to earn operating profits. With the lowest seat mile costs in the industry the airline has offered startlingly low fares, filled its planes and earned $9.9 million operating profit in the first nine months of 1982.

The People Express experience on the Buffalo-Newark route demonstrates the dramatic effect low fare service can have on a medium haul market. In 1980 and through July 1981, U.S. Air served this 300 mile market--operating with load factors near 80 percent. Before People Express entered the unrestricted round trip fare was $123.

In August 1981, People began service with a round trip fare of $38.00. U.S. Air matched. Immediately traffic more than tripled! In the last five months of 1980, 82,000 passengers had flown Buffalo to Newark. In those same months of 1981, 270,000 passengers flew the route. In 1982, traffic has continued more than 300 percent above 1981 levels.

As profits allow People Express to buy additional aircraft, it is bound to affect the industry structure in the Northeast. Over time, U.S. Air, Piedmont and others will have to reduce costs or watch People Express become the dominant carrier in the region.

The success of Southwest, People Express and Midway Airlines (operating out of Chicago to the East and Midwest) has spawned additional new entry efforts. Unfortunately the controller shortage and continuing recession have caused some to abort. But as the economy recovers and air traffic constraints are removed during the next 12 months, new low cost airlines will be formed and the pressures for industry efficiency will intensify.

Of course these changes will not occur quickly or easily. Airport congestion and the control of airport space and services by incumbent carriers could present serious problems for future new entrants, and the defensive practices of some large carriers may become sufficiently predatory in some markets to drive out recent entrants and discourage new entry. Control of computer reservation systems by United, American and TWA and the anti-competitive use of these systems could also be a serious problem. But to date these factors have not prevented entry or driven any new entrant out of business.

Service Convenience

Notwithstanding the effects of the recession on service levels, recent CAB studies show that, on average, convenience for air travellers has improved slightly since 1978, and for connecting passengers, it has improved significantly. The CAB economic staff has measured convenience in terms of departure times, flight en route time and connecting patterns as they relate to preferred arrival times. From June 1978 to June 1981 convenience improved for the large majority of airline passengers.

Passengers who have to change planes en route find it more convenient to remain with the same airline than to transfer to another. In the top 6,000 interstate markets, 11 percent of the passengers had to change airlines when they made connections in 1978. In 1981 only 6 percent had to make that change. At certain hubs, the increase in on-line connecting passengers has been quite dramatic. At St. Louis, only 36 percent of Ozark's connecting passengers could remain with Ozark in 1978. In 1981, 83 percent of such passengers stayed with Ozark. At Denver, Frontier's on-line connecting passengers went from 48 percent in 1978 to 89 percent in 1981. At Pittsburgh, U.S. Air went from 73 percent in 1978 to 89 percent in 1981. These figures show substantial improvements in passenger convenience--and help explain the increased profitability of these carriers under deregulation.

Concentration

During the deregulation debate, opponents predicted that large carriers would drive out small ones and that, after mergers and bankruptcies, market power would be concentrated in a few giant airlines. Since 1978, the market share of the trunks has fallen from about 87 percent of the domestic RPM's to under 80 percent in 1982. This deconcentration process was under way before deregulation but has accelerated rapidly in the past four years.

There is no reason to believe that the process will reverse itself. In fact, the strong trend is away from industry concentration.

"Public Utility" and Other Arguments for Reregulation

Former CAB Chairman Secor Browne argues that the airlines are a public utility and as such should be regulated. He contends that destructive price competition and over-capacity will destroy the national air transportation system unless government regulators intervene. He suggests that the CAB should:

1. Subject route entry and exit to annual quotas to maintain stability;

2. Manage fares, discounts and capacity to improve yields, and set a pricing floor on fares to exclude predation;

3. Encourage the sharing of equipment and facilities so long as it does not create monopoly operations adverse to the public interest.

Such re-regulation is not only unnecessary--it could seriously harm the industry. In the first place, air transport is not a capital intensive public utility requiring economic regulation in the sense that gas and electric companies are. The distribution of gas and electricity to businesses and residences in a city involves expensive installation of lines and pipes that would be extremely wasteful to duplicate. Without competition to regulate price and service quality, government regulation is required. In contrast, airlines use highly mobile equipment and barriers to entry and exit are comparatively low. In short, air transport is a naturally competitive industry. If market forces can regulate price and service quality, government intervention is unnecessary.

Browne claims that price competition is destroying the industry. While there may be a few instances of predation in response to low cost new entrants, none have yet succeeded. As described above, such low fare carriers as Southwest, People Express and Midway are operating profitably and growing. Fare wars during slack traffic periods are the result of over-capacity during the extended deep national recession. When an airline has too many planes, it is not unreasonable to offer fares below fully allocated costs, particularly in price sensitive markets, so long as the variable costs are covered. As Alfred Kahn has pointed out, an industry that fails to cover fixed costs, including a return on investment, because it is burdened with excess capacity is increasingly unlikely to be able to finance orders for new planes. But that is how the market signals that new aircraft are not now needed.

Of course, planning horizons for new aircraft and our cyclical economy have often required that orders be placed during recessions to enable airlines to take delivery and serve increased traffic during periods of prosperity. But in the current long recession, aircraft manufacturers are developing new mechanisms to enable airlines to acquire the use of new aircraft without taking on the burdens of ownership. The American Airlines and TWA lease arrangements with McDonnell-Douglas for DC 9-80 aircraft may signal a new role for the aircraft manufacturer--the maintenance of an equipment inventory, available for short term use by airlines in exchange for higher rentals and/or participation in profits. Somehow individual ingenuity turned loose in a free market environment is able to develop diverse systems for solving market problems.

A regulatory floor on fares would negate much of the thrust and purpose of deregulation. Carriers like People Express and Southwest, whose efficiency and cost structure enable them to charge fares 50 percent and more below standard levels, would be forced to conform to the higher fare practices of their competitors. The pressures on the old airlines for cost cutting and efficiency would be greatly diminished. Even these carriers would lose the flexibility to use price as a marketing tool the way other industries do--to attract passengers in slack periods and to promote new or different service. And the public would suffer from higher fares. To date, fares have been constrained under deregulation. Before 1978, the majority of travelers paid full coach fares. This year over 70 percent of airline passengers traveled on discount fares. Between the fourth quarter of 1976 and the second quarter of 1981, the cost of goods and services airlines must buy (fuel, labor, etc.) rose 101 percent, yet average fares increased only 56 percent.

Browne recommends constraints on entry and exit in order to maintain stability. One of the most dramatic structural developments since deregulation has been the spread of hub and spoke systems among the airlines. The efficiencies achieved by hubbing have helped the industry to survive the long national recession. Freedom of entry and exit has been the key to this restructuring. Constraints on entry and exit would mean that airlines which see profit opportunities in a particular market would be barred by the government from entering it; airlines which find a market unprofitable would be barred by the government from leaving it.

No airline management seeks such constraints. No city has experienced such drastic loss of service as to justify this form of re-regulation.

Nor do Browne's suggestions for sharing equipment among airlines and managing capacity (presumably by inter-carrier agreement or CAB regulation) offer public benefits that outweigh their detriments. Capacity management and the sharing of aircraft would, according to Browne, increase load factors and achieve higher efficiency and thus more profitability for the airlines. In the aftermath of the first oil crisis in the early 1970's the CAB allowed some airlines to enter into capacity control agreements. But the public reaction was so adverse that Congress, in the Airline Deregulation Act of 1978 prohibited such agreements in the future.

The European experience with capacity sharing gives no support to Browne's proposal. Despite pooling agreements, price coordination and tight government regulation, intra-European airline load factors have been lower on average than U.S. domestic load factors since deregulation, while European fares continue to be much higher than U.S. fares.

Summary

For forty years, the U.S. airlines developed their route systems, pricing practices and management styles under government regulation. The air transportation system has now had four years of transition to deregulation. Route structures have been adjusted to better fit the particular capacities of the aircraft operated by each airline and the transportation role devised by each carrier management. Despite the worst and longest recession since World War II and a drastic shortage of air traffic controllers, the American public has been well served and the air transportation system shows no signs of collapse or disintegration. The former local service carriers are prospering and expanding. New airlines are demonstrating that low fare service can be profitably supplied if costs are closely controlled. The older trunk airlines are beginning to lower costs and hold fares down to improve traffic and profitability.

Large trunk carrier losses during the past three years are causing some commentators to urge re-regulation. But most airline managements do not want to relinquish the flexibility and freedom that deregulation has accorded them. They have weathered the economic trauma of the past three years and now want the profit opportunities which recovery will bring.

The public has gained increased convenience and a diversity of price/service options. First class and business class provide comfort and high quality service at a price which reflects their cost. No frills transportation is becoming increasingly available at amazingly low fares. Over the next decade, as the low fare carriers grow, and increasing competition constrains large carrier costs, the public will benefit even more.